

Kodiak Island Borough Coastal Management Plan May 2007

Appendix S Justification for Designated Areas and Enforceable Policies in the March 2006 Final Draft Plan Amendment

This document includes a description of designated areas and enforceable policies that were proposed for approval in the March 2006 Final Draft Plan Amendment. Although many of these policies and designated areas were not approved by the Alaska Department of Natural Resources, they are included here for information purposes only. The designated areas and policies are included here because they address issues important to the Kodiak Island Borough (KIB).

Q-1. Designated Areas

This section provides a justification for the areas designated by the Kodiak Island Borough (KIB) under 11 AAC 114.250. As a result of changes to the Alaska Coastal Management Program (ACMP) regulations passed in 2004 and 2005, these designations are necessary before the KIB can establish enforceable policies for some subjects (11 AAC 114.270).

Q-1.1 Recreation Areas

The KIB designates all non-federal lands in the coastal zone as recreation areas.

Uses and activities that could be proposed for areas designated for recreation include: Subsistence harvests, hunting and fishing, fish and wildlife enhancement, cultural uses, commercial fishing, independent backcountry recreation, hiking, off-road vehicle use, commercial recreation, tourism, development of transportation and utility routes and facilities, sand and gravel extraction, onshore and offshore mining, onshore and offshore oil and gas exploration and development, housing and subdivisions, and remote camps.

Note: The designation language was revised slightly in response to DNR comments in the Final Recommendation to the Commissioner.

Criteria

The KIB has met the criteria for designation of recreation areas under 11 AAC 114.250(c) because the areas designated meet both of the required criteria. The areas receive significant use by persons engaging in recreational use, especially areas accessed by the Kodiak road system or by boat. More remote areas receive some recreational use, but all areas within the borough have a potential for recreation because of physical, biological and cultural features. All areas of the KIB

have extensive physical beauty including rugged mountains and scenic coastal features. The biological attributes of Kodiak attract world attention, especially the Kodiak brown bear.

Justification for the Designation

Recreation is one of Kodiak's most important resources. Recreational opportunities are important for both residents of the borough and visitors. A detailed description of recreation opportunities is found in the resource inventory.

Supporting Materials

The designation is described in Section 5.12.1 and an extensive description of recreation resources is provided in Section 5.12.2. The resource analysis in Section 5.12.3 includes a discussion of why recreation is a unique concern to the district, Section 5.12.3.2 provides a description of how recreation is sensitive to development, and Section 5.12.3.3 describes uses that compete with recreation.

Q-1.2 Natural Hazard Area Designations

The KIB designates the following natural hazards areas under the authority of 11 AAC 114.250(b). These designations apply throughout the coastal zone and exclude federal lands.

- **Tsunami Hazard:** *The areas identified on 2 maps in Appendix D are designated as tsunami hazard areas: 1) Tsunami Hazard Maps of the Kodiak Area, Alaska: City of Kodiak and Vicinity, and 2) Tsunami Hazard Maps of the Kodiak Area, Alaska: Womens Bay and U.S. Coast Guard Reservation.*
- **Earthquake Hazard:** *The entire coastal zone is designated as an earthquake hazard area.*
- **Erosion Hazard:** *The areas 20 feet on either side of flowing waters (from the mean high water mark) and the area 50 feet from marine waters (from the mean high water mark) are designated as erosion hazard areas.*
- **Flood Hazard:** *The area encompassing the high water mark of record is designated as a flood hazard area. Where the high water mark of record is not certain, the area within 50 feet on either side of streams and rivers and the area 50 feet inland from coastal waters is designated as a flood hazard area.*
- **Landslides:** *Slopes greater than 50% (27 degrees) are designated as natural hazard areas for landslide hazard areas. Slide areas at Old Womens Mountain, Pillar Mountain and Pasagshak, as identified in the map named Identified Road System Slide Areas in Appendix E are designated as specific landslide hazard areas for policy C-1.*

Uses and activities that could be proposed for areas designated for natural hazards include: Subsistence harvests, hunting and fishing, fish and wildlife enhancement, cultural uses, commercial fishing, independent backcountry recreation, hiking, off-road vehicle use, commercial recreation, tourism, development of transportation and utility routes and facilities, sand and gravel extraction, onshore and offshore mining, onshore and offshore oil and gas exploration and development, housing and subdivisions, and remote camps.

Note: The designation language was revised slightly in response to DNR comments in the Final Recommendation to the Commissioner.

Criteria

The KIB natural hazard designations meet the criteria for designating areas for natural hazards found in 11 AAC 114.250(b):

A district shall consider the likelihood of occurrence of natural hazards in the coastal area and may designate natural hazard areas.

Other than considering the likelihood of natural hazards, this regulation does not provide specific criteria for the designation. The discussion in the resource inventory provides an in-depth discussion of the likelihood of natural hazards in the KIB.

Justification for the Designation

This justification addresses the five types of hazards designated by the KIB: Tsunami, earthquake, erosion, flood, and landslide hazards. Dr. Gary Carver, a member of the KIB Planning Commission, provided substantial information for the natural hazards discussion in the resource inventory and analysis. A number of Dr. Carver's scientific papers are cited in the coastal management plan.

Tsunamis: The Kodiak Archipelago is very susceptible to tsunamis. Tsunamis inflicted considerable damage to Kodiak Island settlements in 1788, 1933 and 1964. The 1964 earthquake resulted in four major waves at Kodiak City.

As a state, Alaska has the greatest tsunami potential in the nation. Historic tsunamis generated by earthquakes on the Alaska-Aleutian subduction zone have resulted in widespread damage and loss of life along the Alaskan Pacific coast and around the Pacific Ocean. Large seismic events occurring in the vicinity of the Alaska Peninsula, Gulf of Alaska or the Aleutian Islands have the potential to generate significantly destructive tsunamis locally and at locations remote from the state.

Earthquakes: The KIB lies within one of the most active tectonic regions in North America. Since 1867 there have been at least 40 major earthquakes. The active seismo-tectonic structure of the Kodiak islands includes three distinct categories of seismic sources that produce frequent earthquakes: The subduction zone plate interface, the shallow crustal faults in the upper plate of the subduction zone above the interface, and deep faults beneath the plate interface in the subducted oceanic plate. Historic accounts written by Russian fur traders and settlers on Kodiak Island in the late 1700's and the 1800's provide the longest continuous historical record of strong earthquakes along the Aleutian subduction zone between Unalaska and the mainland. Large earthquakes have occurred in the Kodiak area in 1788, 1792, 1844, 1847, 1854, and 1880. Modern instrumental records also show very large or great earthquakes occurred on the subduction zone or on upper plate faults near or on Kodiak Island in 1900, 1912, 1938, 1948, and 1964. All of these earthquakes produced damaging strong ground motions affecting all or part of Kodiak and adjacent islands.

Landslides: Landslides are a concern in some areas of the KIB. For example, ongoing sloughing is apparent on the mountains surrounding the City of Kodiak. Avalanches are also a concern in mountainous areas. Although landslides may occur on lesser slopes, they commonly occur on slopes greater than 50% (27 degrees) (Wildfirenews.com 2005).

Erosion and Flooding: Although many of the rivers in the KIB are short, there is some potential for flooding. The periodicity of floods in the borough has not been extensively studied. The term “high water mark of record” was recommended for use in the policy by staff from the state’s Floodplain Management Program. Flooding is a concern of the state as evidenced by the issuance of Administrative Order 40 by the governor in 1998.

Erosion is an ongoing concern in the KIB. For example, subsidence following the 1964 earthquake has resulted in new vulnerabilities to coastal erosion. For example, as a result of subsidence, Larsen Bay has been more susceptible to erosion (Davis 1979). Streams have the potential for erosion as a result of development activities including gravel extraction.

Flooding and erosion present significant hazards. Flooding from rivers occurs each spring as ice on the rivers begin to break up and water overflows to floodplains. Because the ground is often still frozen, the water does not dissipate quickly. Flooding also occurs from marine waters due to storm surges. Both flooding and movement of water below the flood stage result in erosion that can be exacerbated by project activities. As a result of global warming, nearshore ice forms later in the fall and melts earlier in the spring than in the past. This situation results in more damage from flooding and erosion.

Supporting Materials

Section 5.10 in Chapter 5 provides a detailed discussion of natural hazards. This section cites scientific publications about natural hazards. Section 5.10.1 describes the area designations for natural hazards, and Section 5.10.2 provides resource inventory and analysis information. The previous resource inventory and analysis also contains information about natural hazards (Appendix K). In addition, Section 5.11 provides information about climate change which has a potential to amplify the adverse effects of natural hazards.

Q-1.3 Important Habitat Areas

The KIB designates important habitat areas described in the Section 5.6.1 of the Resource Inventory. In summary, these areas include the following areas excluding federal lands:

- *All anadromous fish water bodies indicated on the ADFG Fish Distribution Database (Appendix F), including a 100-foot buffer on either side of these water bodies from mean high water,*
- *The Tugidak Island Habitat Area (Township 41 South, Ranges 33 - 34 West, Seward Meridian; Township 42 South, Range 33 West, Seward Meridian, Sections 1 – 11, Sections 14 – 23, Sections 25 - 36; Township 42 South, Ranges 34 - 35 West, Seward Meridian; Township 43 South, Ranges 34 - 35 West, Seward Meridian; and the water and land below the mean high tide line in the lagoon at the northeast end of Tugidak Island),*
- *Areas designated for habitat management in the Kodiak Area Plan (see table 5-13 in Chapter 5) (Appendix G),*

- *Areas identified in Maps 1-11 of the 1997 Dames and Moore KIB Sensitive Areas Project report including: Areas of herring spawning concentrations, juvenile Pollock concentrations, Pollock spawning concentrations, herring spawning concentrations, juvenile and adult red king crab and tanner crabs, shellfish, harbor seal haulouts and critical habitat, sea otter concentrations and high-density areas sea lion concentrations, haulouts, and rookeries, seabird colonies and concentrations, areas of concentration for humpback and fin whales, areas of concentration for gray whales, dall's porpoise, minke whales, and orca whales, areas of concentration for ducks, geese and swans (Appendix H).*
- *Sensitive areas identified ADFG MESA maps 37-42 including: Waterfowl spring and fall concentrations, waterfowl winter concentrations, harbor seal concentration areas, sea lion rookeries, sea lion haulouts, sea otter concentration areas, sea bird colonies, shrimp egg hatch/rearing areas, herring spawning areas, and brown bear high use areas (Appendix I), and*
- *Sensitive biological resources identified in four Environmental Sensitivity Index (ESI) maps prepared by NOAA including: Marine bird nesting colonies, Stellar sea lion haulout/rookery sites, harbor seal haulout concentration areas, sea otter concentration areas, waterfowl concentration areas, Pacific herring spawning areas, and razor clam beds (Appendix J).*

Uses and activities that could be proposed for areas designated for important habitat areas include: Subsistence harvests, hunting and fishing, fish and wildlife enhancement, cultural uses, commercial fishing, independent backcountry recreation, hiking, off-road vehicle use, commercial recreation, tourism, development of transportation and utility routes and facilities, sand and gravel extraction, onshore and offshore mining, onshore and offshore oil and gas exploration and development, housing and subdivisions, and remote camps.

Note: The Important Habitat Areas proposed by the KIB were not recommended for approval in the Department of Natural Resources Final Recommendation to the Commissioner. The KIB withdrew this designation from the final plan.

Criteria

The KIB has met the criteria for its important habitat designations. State regulation requires that coastal districts:

Consider and may designate portions of the habitat areas listed in 11 AAC 112.300(a)(1) –(8) and other habitats in the coastal areas as important habitat if
(1) the use of those designation portions have a direct and significant impact on coastal water; and
(2) the designated portions are shown by written scientific evidence to be biologically and significantly productive. 11 AAC 114.250(i)

Habitats Identified in MESA Maps: The habitats identified in the ADFG Most Environmentally Sensitive Area (MESA) maps designated in Section 5.6.1 meet the requirements for important habitat as described below.

- ***Direct and Significant Impact:*** This requirement has been met because certain activities in all of the important habitat area designations have a direct and significant impact on

coastal water, that is, water with a measurable amount of salt water. Certain activities in important habitat areas located in or adjacent to coastal waters can have significant impacts to coastal waters by affecting physical, chemical and biological aspects of coastal waters.

Activities in areas of the coastal zone far from coastal waters can also affect physical, chemical and biological attributes of coastal waters. As explained in Section 5.6.3.3 of Chapter 5, there is a close relationship between uplands and marine systems. As an example, nutrients enter marine areas from areas high up in a watershed. Activities that affect the ability for nutrients to enter into freshwater areas will also have a direct and significant effect to the chemical composition of the marine waters. As well, activities can affect waterflow which also will affect coastal waters.

Most of the habitats included in this designation occur in coastal waters, so all activities in these habitats will have a direct and significant impact to coastal waters. Some of the waterfowl concentration areas and brown bear high use areas occurs onshore immediately adjacent to coastal waters. Activities in these onshore areas are located immediately adjacent to coastal waters, and activities in these habitats will have a direct and significant impact on coastal waters because: 1) Ground disturbing activities have the potential to deposit soil and detritus into surface waters that flow to coastal waters thereby affecting the chemical composition and nutrient level of the coastal waters, and 2) project activities that eliminate habitat or displace fish and wildlife will affect coastal waters because either the fish and wildlife will be displaced to another area or there will be a decreased in their populations. Fish, waterfowl and other biological resources have a direct effect on coastal waters and associated ecosystems through feeding habits, contribution to the food chain upon through mortality, and changes addition of nutrients to coastal waters through normal biological functions. Section 5.6.3.3 provides an expanded discussion of how activities in inland areas affect coastal waters.

- **Scientific Evidence:** The Office of Project Management and Permitting has determined that the habitats included in the MESA maps meet the scientific evidence requirement. The significant productivity of areas designated as important habitat are supported by written scientific evidence. The Alaska Department of Fish and Game Most Environmental Sensitive Area (MESA) maps provide scientific evidence that the areas are biologically and significantly productive. The special productivity of certain areas designated as important habitat is demonstrated in the DNR Kodiak Area Plan. Similarly, the National Oceanic Atmospheric Administration's Environmentally Sensitivity Index (ESI) maps provide scientific evidence that the areas listed on the maps are biologically and significantly productive. Lastly the Alaska Department of Fish and Game's Fish Distribution Database indicates where anadromous fish streams are located. By their very nature, anadromous fish streams are significantly and biologically productive. Without them, anadromous fish would not survive.
- **Mapping Requirements:** The MESA maps meet all of the requirements in the OPMP document titled "Attachment E Mapping and Data Requirements for Coastal District Plans." The maps are at a scale of 1:250,000, a legend is included and the maps and description of the designated area include enough detail to determine whether a project is in or out of the designated area.

Anadromous Waters: The borough has designated anadromous waters and important habitat because of the importance of these waters to the healthy populations of fish and the economy of the region which depends on this resource.

- **Direct and Significant Impact:** Use and activities in anadromous fish habitat have a direct and significant impact on coastal waters because any activity that would decrease the productivity of fish habitat will have direct adverse impacts to the ability to maintain fish populations. A reduction of fish will directly affect the chemical composition of coastal waters reducing their productivity. As discussed in more detail in Section 5.6.3.3, the decomposition of anadromous fish biological material provides significant nutrients to coastal waters. Decomposition of detritus, invertebrates and other animals also affect coastal waters, and any activities that affect the deposition of this material into anadromous waters will also affect coastal waters. In addition, dredging, filling or other activities that result in erosion or suspension of solids in anadromous waters will have a direct effect to coastal waters.
- **Scientific Evidence:** A wide body of scientific studies describes why anadromous waters are biologically and significantly productive. Simply stated, anadromous waters are necessary for the continued existence of anadromous species because without them, there would be no habitat for spawning and rearing of fish. Studies cited in Section 5.6.2.2 and 5.7.2.2 and in the original resource inventory support this assertion.
- **Mapping Requirements:** The Fish Distribution Database meets the requirements in the OPMP document titled “Attachment E Mapping and Data Requirements for Coastal District Plans.” The maps are at a scale of 1:250,000, a legend is included and the maps and they provide enough detail to determine whether a project is in or out of the designated area.

Justification for Important Habitat Areas

The justification for designating the important habitat areas is provided in the resource inventory and analysis. An extensive discussion of fish and wildlife resources and the habitats on which they depend are found in the resource inventory and analysis in Section 5.6.2. This information was obtained from scientific studies, the DNR Kodiak Area plan, MESA maps, ESI maps, and the Fish Distribution Database.

Supporting Materials

The resource inventory and analysis provides supporting material for this designation. Section 5.6.1 describes the designated areas, Section 5.6.2 provides the resource inventory, Section 5.6.3 provides the resource analysis, Section 5.6.3.2 describes sensitive areas, Section 5.6.3.4 describes conflicting uses, and Section 5.6.3.3 describes the connection between inland areas and coastal waters. Additional information from the original resource inventory and analysis has been incorporated into the plan in Appendix K.

Q-1.4 Historic and Prehistoric Area Designation

The KIB designates all non-federal land within its coastal zone as important to the study and understanding of historic and prehistoric resources. As described in the Resource Inventory, archaeological resources could be found anywhere in the borough.

Uses and activities that could be proposed for areas designated for historic and prehistoric resources include: Subsistence harvests, hunting and fishing, fish and wildlife enhancement, cultural uses, commercial fishing, independent backcountry recreation, hiking, off-road vehicle use, commercial recreation, tourism, development of transportation and utility routes and facilities, sand and gravel extraction, onshore and offshore mining, onshore and offshore oil and gas exploration and development, housing and subdivisions, and remote camps.

Criteria

The Historic and Prehistoric Areas designated by the KIB meet the requirements for designation under 11 AAC 114.250(i). No criteria is included in this subsection other than the district must “consider and may designate areas of the coast that are important for the study, understanding, or illustration of national, state, or local history or prehistory.” The uses and activities that apply to these designated areas are identified in the area designation.

Justification for the Designation

The KIB chose to designate large portions of its coastal zone as important for the study, understanding and illustration of historic and prehistoric areas for several reasons.

- Known historic and prehistoric resources occur throughout the coastal zone. Historic resources include cabins used for subsistence, subsistence camps, shipwrecks, plane wrecks, old buildings, remnants from Russian occupation, and other structures. Prehistoric resources include archaeological sites, subsistence camps, graves, and village sites. The entire borough is important for the illustration of historic and prehistoric resources.
- Although known sites have been found throughout the borough, it is likely that there are unknown resources that have not yet been discovered. Because the Alutiiq people used all areas that are now within the borough, including areas currently submerged, it is likely that a prehistoric site could be found anywhere in the coastal zone. This assumption has been substantiated in an email from Dr. Robert Knecht, a noted archaeologist who did studies in the area.
- Because it is both imprudent and illegal to distribute maps of known archaeological sites, it is important to designate large areas rather than specific archaeological sites. As indicated in a November 7, 2005 email from the State Historic Preservation Office to OPMP, confidentiality of archaeological site information is legally based on AS 40.25.120(a)(4) and the Archaeological Resources Protection Act of 1979 (16U.S.C. 470 h). The requirement for confidentiality supports designation of large areas rather than specific sites.

Supporting Materials

The resource inventory and analysis in Section 5.5 provides in-depth supporting materials for the rich variety of historic and prehistoric resources in the KIB. Section 5.5.1 describes the designated area, Section 5.5.2 provides the resource inventory, Section 5.5.3 provides the resource analysis, Section 5.5.3.1 describes why this resource is a unique concern to the district, and Section 5.5.3.2 explains why this resource is sensitive to development. In addition, the original resource inventory and analysis provides information about these resources, and this document has been incorporated into the plan as Appendix K.

Q-1.5 Commercial Fishing and Seafood Processing Facility Designation

The KIB designates all non-federal coastal waters as important for commercial fishing and seafood processing facilities.

Uses and activities that could be proposed for areas designated as suitable for commercial fishing and seafood processing facilities: Subsistence harvests, hunting and fishing, fish and wildlife enhancement, cultural uses, commercial fishing, independent backcountry recreation, hiking, off-road vehicle use, commercial recreation, tourism, development of transportation and utility routes and facilities, sand and gravel extraction, onshore and offshore mining, onshore and offshore oil and gas exploration and development, housing and subdivisions, and remote camps.

Note: The areas designated as suitable for commercial fishing and seafood processing facilities were not recommended for approval in the DNR Final Recommendation to the Commissioner. The KIB withdrew this designation from the final plan.

Criteria

The KIB has met the criteria for designating areas for this category because it has considered areas suitable for this designation and designated such areas. The criteria are provided in 11 AAC 114.250(f):

A district shall consider and may designate areas of the coast suitable for the location or development of facilities related to commercial fishing and seafood processing.

Justification

Commercial fishing and seafood processing are the most important economic forces for residents of the KIB. Each year, Kodiak is ranked as one of the top ports for commercial fishing landings in the nation, often ranked in the top two ports.

Seafood processing facilities include onshore and offshore facilities including processing plants and offshore floating processors. Commercial fishing facilities include harbors and the fishing boats themselves. Both the Webster's dictionary definition of facility, as well as the definition in the plan, support the assertion that a boat is a facility that is used for commercial fishing.

Commercial fishing boats and floating processors may be located anywhere in coastal waters. Therefore, the KIB has designated all coastal waters as suitable for commercial fishing and seafood processing facilities.

Supporting Materials

Information in the resource inventory and analysis provides supporting information for this designation. Section 5.7.1 describes the designation, Section 5.7.2 provides the resource inventory, Section 5.7.3 provides the resource analysis, Section 5.7.3.1 describes why this resource is a unique concern to the districts, Section 5.7.3.2 describes why it is sensitive to development, and Section 5.7.3.3 describes competing uses. The discussion in Section 5.6 also provides information about the species important for commercial fishing and seafood processing. In addition, the original resource inventory and analysis provides information about these resources, and this document has been incorporated into the plan as Appendix K.

Q-1.6 Subsistence Use Areas

The KIB designates two types of subsistence areas:

- 1) Marine-based subsistence use including all coastal waters within the KIB, and*
- 2) Land- and fresh water-based subsistence use including all non-federal land and aquatic waters within the KIB.*

Uses and activities that could be proposed for areas designated for subsistence include: Subsistence harvests, hunting and fishing, fish and wildlife enhancement, cultural uses, commercial fishing, independent backcountry recreation, hiking, off-road vehicle use, commercial recreation, tourism, development of transportation and utility routes and facilities, sand and gravel extraction, onshore and offshore mining, onshore and offshore oil and gas exploration and development, housing and subdivisions, and remote camps.

Note: In response to DNR comments in the Preliminary Recommendation to the Commissioner, the KIB revised the subsistence use areas by developing detailed subsistence use maps. The above designation language is not included in the final plan.

Although federal land is not included in these designations because it is technically not part of the KIB's coastal zone, activities on federal land and waters are reviewed for consistency with the enforceable policies written for subsistence designations if activities would affect coastal resources or uses.

The KIB has chosen to meet the requirements of 11 AAC 114.270 by describing the subsistence use designations rather than mapping them. A person may determine whether a project is in one of these types of designations by referring to the coastal boundary maps in Appendix A. These maps identify the boundaries of the coastal zone and the location of federal lands that are excluded from the designation. Supporting information for subsistence uses in these areas is provided in the remainder of this resource inventory and analysis.

Uses and activities that could be proposed for areas designated for subsistence include: subsistence harvests, hunting and fishing, fish and wildlife enhancement, cultural uses,

commercial fishing, independent backcountry recreation, commercial recreation, tourism, development of transportation and utility routes and facilities, sand and gravel extraction, onshore and offshore mining, onshore and offshore oil and gas exploration and development, housing and subdivisions, remote camps, and off-road travel.

Criteria

The KIB has chosen to meet the requirements of 11 AAC 114.270(g) by describing the subsistence use designations rather than mapping them. A person may determine whether a project is in one of these types of designations by referring to the coastal boundary maps in Appendix A. These maps identify the boundaries of the coastal zone and the location of federal lands that are excluded from the designation. Supporting information for subsistence uses in these areas is provided in the remainder of this resource inventory and analysis.

The KIB met the consultation requirements in 11 AAC 114.250(g) through an extensive outreach. First, a public notice inviting comments was published in the Kodiak Island Mirror on March 23 and 25, 2005. Second, a cover letter was sent to Native corporations and tribal organizations specifically requesting comments. Third, a notice about the availability of the plan was sent by email to state and federal agencies and tribal organizations. Fourth, public meetings of the KIB Planning Commission and Assembly were public noticed and open to everyone. Fifth, the Division of Subsistence was contacted several times during development of this plan including the headquarters and the regional office. OPMP confirmed that this agency was the “appropriate” state agency for consultation in a September 26, 2005 email.

The designated subsistence areas include only areas in which a subsistence use is an important use of coastal resources as defined in Chapter 4 of the plan. Although “important use” is not defined in state regulations, it is defined in Chapter 4 of the plan to include customary and traditional use areas that are used each year as well as those areas that are used on an occasional basis when subsistence resources are not located in the regularly used areas.

The designations meet the requirement in 11 AAC 114.250(g) for designation of “areas in which a subsistence use is an important use of a coastal resources.” Although there is no regulatory requirement to do so, the KIB has designated two types of subsistence uses in response to DNR’s policy to designate different types of subsistence uses. In a September 21, 2005 email, OPMP staff stated that they were unable to provide an exhaustive list of potential subsistence uses that could be designated but that “it is best left in the hands of the coastal district to identify those specific subsistence use areas that warrant designation.”

The regulation authorizing designation of important subsistence use areas, 11 AAC 114.250(g), references, “a subsistence use,” but this chapter only includes a definition for subsistence *uses*. The definition of subsistence uses referenced in 11 AAC 112.990(38) does not specify different types of subsistence uses, but it does state that subsistence uses involve the “noncommercial, customary and traditional *uses* of wild, renewable *resources* . . .” (emphasis added). Although DNR contends that The ACMP regulations do not define different types of subsistence uses, the definition of subsistence states that after consultation, the district “may designate areas in which a subsistence use is an important use of coastal resources . . .”

Justification for Subsistence Designations

The KIB has determined that its residents participate in two types of subsistence use: 1) marine-based and 2) land- or fresh-water based subsistence. The KIB considered other alternatives but

determined it is not feasible to categorize subsistence use further into additional categories. The following discussion supports this conclusion.

Data Limitations: It would be inappropriate to use information from subsistence studies to designate types of subsistence use based on resources harvested because of incomplete data as discussed below.

- Limited Time Periods: Studies only reflect a “snapshot in time,” and the limited periods for data collection in a study may not reflect year-to-year differences.
- Climate Change: Climate change leads to decadal changes in the distribution and behavior of subsistence species.
- Study Method: Many studies record only harvest locations but not the entire hunting area.
- Reluctance to Reveal Information: Most studies rely on interviews with subsistence users. Users are often reluctant to reveal information about their “secret spots” for fear that this information will lead to competition from others. Interviewees may not offer information about other subsistence users.
- Inappropriate Scale: Many studies use maps with information that cannot be transferred to the scale required for an ACMP designation.

Year-to-Year Variations: A number of factors affect annual differences in subsistence use.

- Migration Changes: Changes in subsistence use result reflect the availability of subsistence resources due to changes to migration patterns change (both natural and as a result of industry activities). Migration patterns of certain species may change from year-to-year. For example, caribou often change the precise areas they migrate. At times, certain species may abruptly change their migration patterns after years of similarity. For example, caribou herds have suddenly abandoned regions of the state.
- Financial Concerns: The availability of funds to support subsistence activities can affect a community’s subsistence use patterns. Factors related to this issue include fuel costs and availability of ATVs, boats, motors, snow machines, and other equipment.
- Time: Jobs and family commitments can result in year-to-year changes in subsistence use.
- Substitution: During years when a target species are not available to be harvested in quantities necessary to sustain a community, users may target a different species.
- Climate Effects: The availability of subsistence resources can be affected by short- and long-term climate variability. For example, weather patterns during a given year will affect when species migrate, including caribou, waterfowl and marine mammals. Effects of climate change also affect the availability of species during a given year. For example, as ocean temperatures rise, the availability of fish that require a narrow range of temperature variation, such as sockeye salmon, are likely to be less available in the district’s marine waters.
- Development Effects: Expected or unanticipated effects from projects can affect subsistence resources thereby affecting the location of subsistence usage. Projects can affect natural migration and distribution patterns of resources. As well, perception of tainted or stressed resources from development activities may lead a user to seek resources from a different area.
- Opportunistic Harvests: Subsistence harvest is often fluid. While a user may target one resource on a given day, other resources will be harvested when they are encountered. A study may only reflect the primary resource targeted by the user.
- Adventure: While as a general rule, subsistence users will target species closest to their village, users often expand their harvest areas when they have time and fuel to explore new areas or to target an area used by their parents or grandparents.

Scientific Caution: Many subsistence use studies specifically caution against using the information in the studies for management purposes such as area designations. Quotes from a few studies are listed below:

We sincerely hope that land planners and researchers alike who use this information do not fall prey to “the boundary syndrome” but remember that the lines drawn on this map merely represent outer limits of our current documentation (July 1978) . . . (Pederson 1979, p. 7)

A note of caution is deemed appropriate at this point. The subsistence lifestyle is a dynamic thing. The total population of each animal is constantly changing. The range of any particular species is also changing, but normally over a greater period of time. . . (FEIS for Alaska OCS 1979 Federal- State Lease Sale 1979)

In many instances, hunters may actually scan a much greater area than what is depicted on our maps. It is therefore imperative that the boundary information presented not be taken literally as fixed limits, but with the recognition that it is an ever-shifting line that expands and contracts according to numerous factors including game abundance, snow conditions, and gasoline availability” (Pederson et al. 1985, p. 22).

The sites used in this report should not be viewed as the only sites used by Kaktovik people (Jacobson and Wentworth 1982, p. ix).

Supporting Materials

Studies described in the resource inventory and analysis (Section 5.4 of Chapter 5) support the subsistence use designations. The resource inventory and analysis summarize studies that document subsistence use of KIB residents.

While the studies reveal that subsistence use of a specific resource varies from year-to-year, the research clearly demonstrates that subsistence use occurs within and beyond the coastal zone. Subsistence use extends offshore of the state’s coastal zone as well as beyond coastal district boundaries and into neighboring coastal districts.

In addition to use of the entire coastal zone for subsistence harvest activities, areas of the borough are used for other subsistence activities identified in the definition of subsistence uses in 11 AAC 112.990(38). These uses include personal and family consumption as food, shelter, fuel, clothing, tools, and transportation. Also, the definition includes making and selling of handicraft articles and the trade or bartering subsistence resources. These activities extend far beyond the boundaries of the coastal zone. The harvest areas for most communities overlap with the areas used by adjacent communities.

Q-2. Enforceable Policy Justification

The Kodiak Island Borough (KIB) used a 5-part process to ensure that its enforceable policies met the requirements of Alaska Coastal Management Program (ACMP) statutes, including AS 46.40.070, and regulations including 11 AAC 114.270. This process included the following steps:

- 1) Completion of an initial evaluation of its existing enforceable policies in June 2004 to determine which policies would need to be eliminated or revised to meet new statutory and regulatory requirements,

- 2) A thorough review of the June 2, 2005 Alaska Department of Natural Resources (DNR) document: *The Alaska Coastal Management Program, as Amended*,
- 3) Consideration of comments received on the Public Review Draft of its coastal management plan,
- 4) A comprehensive review of state and federal laws, and
- 5) Development of this justification that includes an analysis of the adequacy of state and federal laws to address a matter of local concern for each policy.

The state or federal law that relates most to a policy is discussed in the justification for each policy. It should be noted, however, that the KIB did an exhaustive review of state and federal laws relevant to management of coastal uses and resources.

The KIB believes that many of these policies are justified because the “avoid, minimize and mitigation” sequencing in 11 AAC 112.900 is inadequate because it overly broad and general. The analysis for why this regulation is inadequate is presented under the justification for enforceable policy A-1. This discussion is not repeated under each policy, but it is the intent of the KIB that this discussion be applied to each policy for which a statewide standard contains the word “avoid, minimize or mitigate.”

Policy A-1: Mitigation Sequencing

a. In addition to the considerations in sequencing process outlined in 11 AAC 112.900, the coordinating agency shall consider social, cultural and environmental factors and cumulative adverse impacts when considering whether adverse impacts must be avoided, minimized or mitigated. When determining whether the project has avoided or minimized adverse impacts to the maximum extent practicable, the project effect on resource and ecosystem functions shall be considered.

b. This policy applies to uses and activities related to each enforceable policy of the KIB.

Note: This policy was not approved.

Subject Use: This policy applies to each KIB enforceable policy, and as such, it applies to the subject use identified in the each of those policies.

Criteria: This policy fulfills the requirements of 11 AAC 114.270 (a) because it addresses *uses and activities* identified in acceptable subject uses (11 AAC 114.250). Because this policy applies to all other policies, the specific subject uses are identified in each policy. This policy is precise and prescriptive because it adds specificity to the sequencing procedures in 11 AAC 112.900.

Defined Area: As explained under the justification for each individual policy, this policy applies to specific coastal uses and resources in a defined area of the coastal zone.

Sensitivity to Development: As justified for each individual policy, the uses and resources for which this policy applies are sensitive to development.

Not Adequately Addressed: The statewide avoid, minimize and mitigation sequencing process outlined in 11 AAC 112.900 does not adequately address coastal uses or resources for 5 reasons:

- 1) The process for determining whether a project must to avoid or minimize adverse impacts is vague and it does not include consideration of adverse impacts too resource functions,
- 2) The specific requirements of the process are unclear because important terms are not defined (e.g., “maximum extent,” “functional values,” and “adverse impacts”),
- 2) The determination of “practicability” in the process does not take into account social, cultural and environmental factors,
- 4) The process does not consider cumulative impacts of the project in conjunction with other projects,
- 5) The state sequencing process only applies to 3 statewide standards: Habitats standard (11 AAC 112.300), Transportation Routes and Facilities (11 AAC 112.280), and Utility Routes and Facilities (11 AAC 112.240).

The specific process for determining whether adverse impacts of a project need to be avoided, minimized or mitigated is confusing, and it has the potential to delay projects because of different perceptions of what the regulation requires. The KIB enforceable policy and associated definitions will make implementation of the sequencing process more precise and predictable. The policy is necessary to ensure that the applicant, coordinating agency and review participants have a common understanding of how the process will be implemented.

The state sequencing process for determining when a project must avoid or minimize an adverse effect is not clear. The KIB policy clarifies that the effects of the project on resource and ecosystem functions will be considered. In addition, defining the term “maximum extent” makes it clear that all reasonable alternatives that would avoid or minimize adverse impacts must be considered. Defining this term will add specificity and clarity to the mitigation process.

Two other terms have been defined in the KIB plan to provide more clarity. The term “adverse impact” has been defined to clarify that it includes individual and cumulative effects that would negatively affect a coastal use or resource. The term “functional value” used in the sequencing process is confusing because it combines two separate concepts into a single term. While the term “function” generally refers to an attribute or process of a resource or system, a value is the worth placed on a function by humans. Defining the term “function” will reduce confusion because it will focus the analysis of adverse impacts to how a resource supports other coastal resources or uses. The term “function” has been defined to mean an environmental or physical property or process that supports a coastal resource or use.

The statewide standard does not adequately address coastal uses or resources because the term “practicable” is limited to the feasibility of an action “in light of overall project purposes after considering cost, existing technology, and logistics . . .” (11 AAC 112.990(18)). Limiting consideration to these factors does not adequately address coastal resources or uses because it does not include provisions for determining project effects on social, cultural and environmental resources. The KIB policy ensures these resources and cumulative impacts will be considered.

The state sequencing process is also inadequate because it only applies to three statewide standards: Habitats standard (11 AAC 112.300), Transportation Routes and Facilities (11 AAC 112.280), and Utility Routes and Facilities (11 AAC 112.240). The KIB policy extends the mitigation process to all resources and uses covered by its enforceable policies.

The June 2, 2005 document prepared by DNR, *The Alaska Coastal Management Program As Amended*, states that districts may not write a policy for a subject in a statewide standard that uses the terms “avoid, minimize or mitigate” (Subsection 5.3.8.15). We believe the DNR has misinterpreted the regulations because the sequencing process outlined in 11 AAC 112.900

clearly states that the process applies to both the statewide standards “and for the purposes of district enforceable policies . . .” If the purpose of the sequencing process was to replace the need for an enforceable policy, it would have included a specific prohibition rather than establishing the applicability of the process for district enforceable policies.

State and federal laws reviewed for this analysis of adequacy include 11 AAC 112.300, 11 AAC 112.280, 11 AAC 112.240, 11 AAC 112.900, 11 AAC 112.990, 11 AAC 114.270, and 11 AAC 114.250.

Unique Concern: The resources and uses addressed by this policy apply to those covered by each individual KIB policy. The demonstration that the resources and uses are a unique concern is made in the justification for each enforceable policy.

Policy A-2: Monitoring and Compliance Enforcement

a. The applicant shall include monitoring and compliance measures and a reporting schedule for those measures in the project description for use by permitting agencies to determine whether project effects exceed those outlined in the consistency certification and supporting information.

b. This policy applies to uses and activities related to each enforceable policy of the KIB.

Note: No part of this policy was approved.

Subject Use: This policy applies to each KIB enforceable policy, and as such, it applies to the subject use identified in the each of those policies.

Criteria: This policy fulfills the requirements of 11 AAC 114.270 (a) because it addresses *uses and activities* identified in acceptable subject uses (11 AAC 114.250). Because this policy applies to all other policies, the specific subject uses are identified in each policy.

Defined Area: As explained under the justification for each individual policy, this policy applies to specific coastal uses and resources in a defined area of the coastal zone.

Sensitivity to Development: As justified for each individual policy, the uses and resources for which this policy applies are sensitive to development.

Not Adequately Addressed: Coastal resources and uses are not adequately addressed because the consistency review procedures do not require that applicants include information about how they will conduct monitoring and reporting procedures. State laws consulted for this policy include the following: 11 AAC 110.215, 11 AAC 110.420, 11 AAC 112.900, 11 AAC 114.270, 15 CFR 930.58, and 15 CFR 930.76. Comments on the public review draft from state and federal agencies did not reference any other laws that addressed this policy.

Unique Concern: The resources and uses addressed by this policy apply to those covered by each individual KIB policy. The demonstration that the resources and uses are a unique concern is made in the justification for each enforceable policy.

Policy B-1: Multiple Use

a. Applicants shall design and use port, piers, docks, terminals, cargo handling, storage, parking adjacent to coastal waters, and structures or dredged or fill material placed in coastal waters to minimize the need for duplicative facilities. Applicants shall include an analysis in the application packet of expected and reasonably foreseeable subsequent use of project facilities.

b. This policy is established for the Coastal Development standard (11 AAC 112.200) subject use. It applies to all uses and activities related to siting of facilities in or adjacent to coastal waters and placement of dredged or fill material into coastal waters.

Note: This policy was approved but with substantially different language.

Subject Use: Coastal Development Standard (11 AAC 112.240)

Criteria: This policy fulfills the requirements of 11 AAC 114.270. The policy addresses *uses and activities* identified in an acceptable subject use, the statewide Coastal Development Standard (11 AAC 112.200). Subsection (a) of the statewide standard includes all uses and activities in or adjacent to coastal waters, and subsection (b) addresses placement of structures and the discharge of dredged materials into coastal waters.

Defined Area: This policy applies to a defined area of the coastal zone, coastal waters and areas adjacent to them.

Sensitivity to Development: Areas adjacent to coastal areas are sensitive to development because waterfront areas are limited. Due to the shortage of waterfront areas in the district, it is important to know what future uses an applicant plans for an area. This information will be useful when determining priority for uses that are economically or physically dependent on a coastal location. As described in the Resource Inventory, coastal uses and resources are sensitive to development: Subsistence (Section 5.4.3.3), habitats (Section 5.6.3.2), commercial fishing and seafood processing facilities (Section 5.7.3.2), and recreation (Section 5.12.3.2).

Not Adequately Addressed: With respect for the concern of limited availability of areas adjacent to coastal waters, existing state and federal laws are inadequate. There are no procedures in these laws that require applicants to minimize the need for duplicative facilities. In addition, there are no requirements for an applicant to disclose future uses for the site other than the use related to the project.

Specific state and federal laws that relate to this policy include the following the coastal development standard, 11 AAC 112.200. We did not find any other state or federal law that addressed duplicative uses for facilities located in or adjacent to coastal waters. No agencies identified any other state laws that address this issue.

Unique Concern: Coastal waters and areas adjacent to them are a unique concern to the KIB because these areas are limited, and uses committed to them can affect other uses that require a coastal location. The importance of water-dependent resources and uses are discussed in the resource inventory in the following sections: Subsistence (Section 5.4.3.1), habitats (Section 5.6.3.1), commercial fishing and seafood processing facilities (Section 5.7.3.1), recreation (Section 5.12.3.1), and natural hazards (Section 5.10).

Policy B-2: Compatibility

a. Structures placed in or adjacent to coastal waters shall be compatible with recreation, subsistence and commercial fishing uses of those areas. Applicants shall describe in the project description measures that will make potentially conflicting project activities compatible with adjacent land and water uses.

b. This policy is established for the Coastal Development standard (11 AAC 112.200) subject use. It applies to all uses and activities related to or affected by the siting of facilities in or adjacent to coastal waters.

Note: This policy was not approved.

Subject Use: Coastal Development Standard (11 AAC 112.240)

Criteria: This policy fulfills the requirements of 11 AAC 114.270. The policy addresses *uses and activities* identified in an acceptable subject use, the statewide Coastal Development Standard (11 AAC 112.200). Subsection (a) of the statewide standard includes all uses and activities in or adjacent to coastal waters, and subsection (b) addresses placement of structures and the discharge of dredged materials into coastal waters.

Defined Area: This policy applies to a defined area of the coastal zone, coastal waters and areas adjacent to them.

Sensitivity to Development: Areas adjacent to coastal areas are sensitive to development because waterfront areas are limited. As such the use of these areas for recreation and subsistence use are sensitive to other competing uses of these areas. Information about compatibility will be useful when determining priority for uses that are economically or physically dependent on a coastal location. As described in the Resource Inventory, coastal uses and resources are sensitive to development: Subsistence (Section 5.4.3.3), habitats (Section 5.6.3.2), commercial fishing and seafood processing facilities (Section 5.7.3.2), and recreation (Section 5.12.3.2).

Not Adequately Addressed: With respect for the concern of limited availability of areas adjacent to coastal waters, existing state and federal laws are inadequate. There are no procedures in these laws that require applicants to make uses compatible in or adjacent to coastal waters.

Specific state and federal laws that relate to this policy include the following the coastal development standard, 11 AAC 112.200. We did not find any other state or federal law that addressed duplicative uses for facilities located in or adjacent to coastal waters. No agencies identified any other state laws that address this issue.

Unique Concern: Coastal waters and areas adjacent to them are a unique concern to the KIB because these areas are limited, and uses committed to them can affect other uses that require a coastal location. The importance of water-dependent resources and uses are discussed in the resource inventory in the following sections: Subsistence (Section 5.4.3.1), habitats (Section 5.6.3.1), commercial fishing and seafood processing facilities (Section 5.7.3.1), recreation (Section 5.12.3.1), and natural hazards (Section 5.10).

Policy B-3: Dredge and Fill Activities

a. An applicant for a project that will place structures or discharge dredge or fill material into coastal waters must include in the project description measures that will:

- 1. Avoid deposition of materials into important fish and wildlife habitats,*
- 2. Limit the extent of direct disturbance to as small an area as possible, or*
- 3. Minimize effects to circulation and drainage patterns necessary for the productivity of fish habitat.*

b. This policy is established for the Coastal Development standard (11 AAC 112.200) subject use. It applies to all uses and activities related to placement of structures in or adjacent to coastal waters and placement of dredged or fill material into coastal waters.

Note: This policy was approved with substantial changes to subsection a. Rather than applying to anadromous waters, the approved policy only applies to coastal waters and requires that dredge and fill activities be limited to as small of an area as possible.

Subject Use: Important Habitat Areas (11 AAC 114.250(h))

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). The policy is clear and concise regarding the requirements, the activities and the persons affected by it. It provides more specificity to the statewide standard because it describes conditions that applicants must meet to minimize adverse impacts while dredging and filling in an important habitat area. The measure is precise and prescriptive and adds predictability for project applicants.

Defined Area: This policy applies to a defined portion of the coastal zone because it applies to the anadromous fish streams designated by the KIB as important habitat and described in Chapter 5.

Sensitivity to Development: Anadromous fish streams in the KIB are sensitive to development because of their importance to fish at critical life stages. Anadromous fish are keystone species upon which many other animals and humans in the KIB depend. They are also bellwether species by which the health of ecosystems can be measured. Anadromous fish habitat in fresh and marine waters can be adversely impacted by a wide range of development activities, including direct physical destruction of intertidal, wetland, upland or benthic habitat and effects to the organisms that depend on these habitats. Any activity that results in the introduction of pollutants, including run-off, sedimentation, soil deposition, leaching of chemicals, etc, may adversely impact fish habitats. Additionally, the introduction of non-native species may result in a change in predator-prey relationships, shoreline or stream channel modification or other changes to the landscape may modify water flow, circulation, quantity, temperature and other conditions that affect the health of anadromous fish habitat. The relationship between fresh and salt water systems vital to the health of anadromous fish habitat may be affected by development on or offshore, or even inland. The sensitivity to development is discussed in more detail in the resource analysis in Sections 5.6.3.3 and 5.6.3.4.

Not Adequately Addressed: State and federal statutes and regulations do not adequately address dredge and fill activities in anadromous streams because they are broad and vague and rely on agency discretion to set conditions for individual projects. While the following state and federal regulations address dredging and filling activities in anadromous streams, this policy is more specific and prescriptive and adds predictability for applicants:

AS 16.10.010 requires that a person apply for and obtain a permit from the DEC before (1) obstructing, diverting or polluting waters of the state, either fresh or salt, utilized by salmon in the propagation of the species by placing any of the listed pollutants or debris (including dredged or fill materials) into those waters; (2) erecting a dam, barricade, or obstruction to retard...divert the waters that would affect the free ingress or egress of salmon into those waters,; or (3) render the waters described in section (1) as inaccessible or uninhabitable for salmon spawning or propagation.

This regulation requires permitting by DEC for dredging or filling in waters used by salmon for propagation; it does not describe specific measures for minimization of the adverse impacts listed within the regulation, thus lacking the specificity of this KIB policy. This regulation also applies only to salmon and not to other anadromous fish.

The Office of Habitat Management and Permitting administers AS 41.14.840 (Fishway Act) and AS 41.14.870 (Anadromous Fish Act).

Regarding obstructions to fish streams, AS 41.14.840 is inadequate because it only applies when “the deputy commissioner considers it necessary.” Rather than requiring anything, this statute only allows the Alaska Department of Natural Resources to require a fishway and a device for passage of downstream migrating fish. Because implementation of this statute is completely discretionary, it is inadequate.

AS 41.14.870 has four subsections. Subsection (a) requires specification of rivers, lakes and streams that are important for the spawning, rearing or migration of anadromous fish. The Fish Distribution Database created by the Alaska Department of Fish and Game is part of the coastal management plan in Appendix G. Subsection (b) requires notification to the deputy commissioner for projects that “construct a hydraulic project, or use, divert, obstruct, pollute, or change the natural flow or bed of a specified river, lake, or stream, or use wheeled, tracked, or excavating equipment or log-dragging equipment in the bed of a specified river, lake, or stream . . .” Subsection (c) provides the deputy commissioner the discretion to require information about the project, including full plans and specifications. Subsection (d) gives the deputy commissioner the discretion to find “the plans and specifications insufficient for the proper protection of fish and game. This statute is insufficient because subsections (c) and (d) are discretionary and because it does not provide specificity about what entail “proper protection of fish and game.”

Permits are required under federal law for work in water, including dredging and filling in waters of the United States (40 CFR Part 230, 33 CFR Part 323, 33 CFR Part 325), and by the Alaska Department of Environmental Conservation under the Section 401 certification. While these permitting processes may require project applicants to adopt measures to mitigate harmful discharges, the statutes and regulations rely on agency discretion to condition permits on an individual basis.

18 AAC 70.015 requires that water quality necessary to protect existing uses must be maintained and protected, including water quality necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water. The regulation gives DEC discretion in application of the antidegradation policy of the state. It does not address the impacts other than water quality of discharging dredged and fill materials into anadromous streams.

The justification of why the “avoid, minimize, and mitigate” sequencing process does not adequately address this matter is presented under the justification for Policy A-1.

Unique Concern: The important habitat, anadromous fish streams, addressed by this policy is a unique concern to the KIB because of the keystone role of anadromous fish in the district's ecosystems and because of the human dependence on this resource. Further detail may be found in the Resource Analysis, Sections 5.6.3.4 and 5.2.7.1.

Policy B-4: Disposal of Dredge Spoil

a. Dredged materials disposed of in shoreline landfills shall not significantly alter important functions of habitats or significant adverse impacts to shoreline processes, such as circulation, coastal erosion and deposition patterns. Onshore disposal sites for dredged material shall be contained and stabilized to prevent erosion and leaching into adjacent waters. Offshore disposal of dredge spoil shall not occur in areas designated as important habitats.

b. This policy applies to areas designated as important habitat areas under 11 AAC 114.250(h) as described in Section 4.5.

Note: No part of this policy was approved. The policy was revised in the August 2006 submittal to disallow disposal of dredged materials into riparian habitats. The Final Recommendation to the Commissioner found that the revised policy language met the requirements of 11 AAC 114.270(g) but that it was not approvable because no important habitat areas were approved.

Subject Use: 11 AAC 114.250(h)

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). The policy is clear and concise regarding the requirements, the activities and the persons affected by it. The policy describes the conditions an applicant must meet to minimize significant adverse impacts to fish and wildlife habitat from erosion of dredged materials into fish and wildlife habitat.

Defined Area: This policy applies to a defined portion of the coastal zone because it applies to riparian areas designated as important habitat under 11 AAC 112.250(h).

Sensitivity to Development: Anadromous fish, intertidal, shoreline and marine habitats in the district are sensitive to development because of their importance to fish at critical life stages. They are also bellwether species by which the health of ecosystems can be measured. Habitats in fresh and marine waters can be adversely impacted by a wide range of development activities, including direct physical destruction of intertidal, wetland, upland or benthic habitat and effects to the organisms that depend on these habitats. Any activity that results in the introduction of pollutants, including run-off, sedimentation, soil deposition, leaching of chemicals, etc, may adversely impact fish and wildlife habitats. Rapid drainage and minimal soil development in dredged waste piles may limit the establishment of vegetation on mining waste or dredge spoils. Shoreline or stream channel modification or other changes to the landscape may modify water flow, circulation, quantity, temperature and other conditions that affect the health of

anadromous fish habitat. The relationship between fresh and salt water systems vital to the health of anadromous fish habitat may be affected by development on or offshore, or even inland. The sensitivity to development is discussed in more detail in the resource analysis in Section 5.6.3.2.

Not Adequately Addressed: State and federal statutes and regulations do not adequately address containment and stabilization to prevent erosion and associated effects to fish and wildlife habitat from dredged materials that are disposed of onshore in riparian areas. Existing statutes and regulations they are broad and vague and rely on agency discretion to set conditions for individual projects. Many existing statutes and regulations regarding this matter address anadromous fish habitat but do not pertain to other wildlife habitat. While the following state and federal regulations address dredging and filling and associated activities in anadromous streams, this policy is more specific and prescriptive and adds predictability for applicants:

AS 16.10.010 requires that a person apply for and obtain a permit from the DEC before (1) obstructing, diverting or polluting waters of the state, either fresh or salt, utilized by salmon in the propagation of the species by placing any of the listed pollutants or debris (including dredged or fill materials) into those waters; (2) erecting a dam, barricade, or obstruction to retard...divert the waters that would affect the free ingress or egress of salmon into those waters,; or (3) render the waters described in section (1) as inaccessible or uninhabitable for salmon spawning or propagation.

This regulation requires permitting by DEC for dredging or filling in waters used by salmon for propagation; it does not describe specific measures for minimization of the adverse impacts listed within the regulation, thus lacking the specificity of this district policy. This regulation also applies only to salmon and not to other anadromous fish.

The Office of Habitat Management and Permitting administers AS 41.14.840 (Fishway Act) and AS 41.14.870 (Anadromous Fish Act).

Regarding obstructions to fish streams, AS 41.14.840 is inadequate because it only applies when “the deputy commissioner considers it necessary.” Rather than requiring anything, this statute only allows the Alaska Department of Natural Resources to require a fishway and a device for passage of downstream migrating fish. Because implementation of this statute is completely discretionary, it is inadequate.

AS 41.14.870 has four subsections. Subsection (a) requires specification of rivers, lakes and streams that are important for the spawning, rearing or migration of anadromous fish. The Fish Distribution Database created by the Alaska Department of Fish and Game is part of the coastal management plan in Appendix F. Subsection (b) requires notification to the deputy commissioner for projects that “construct a hydraulic project, or use, divert, obstruct, pollute, or change the natural flow or bed of a specified river, lake, or stream, or use wheeled, tracked, or excavating equipment or log-dragging equipment in the bed of a specified river, lake, or stream . . .” Subsection (c) provides the deputy commissioner the discretion to require information about the project, including full plans and specifications.

Subsection (d) gives the deputy commissioner the discretion to find “the plans and specifications insufficient for the proper protection of fish and game. This statute is insufficient because subsections (c) and (d) are discretionary and because it does not provide specificity about what entail “proper protection of fish and game.”

Permits are required under federal law for work in water, including dredging and filling in waters of the United States (40 CFR Part 230, 33 CFR Part 323, 33 CFR Part 325), and by the Alaska Department of Environmental Conservation under the Section 401 certification. While these permitting processes may require project applicants to adopt measures to mitigate harmful discharges, the statutes and regulations rely on agency discretion to condition permits on an individual basis.

18 AAC 60.430 requires the owner or operator of a drilling waste storage facility to meet certain storage requirements, including a description of methods to be used to prevent the discharge of drilling waste leachate to the land or water of the state. Also, the facility design must consider the seasonal high groundwater table, surface water, continuous permafrost, as well as proximity to human population and to public water systems, with the goal of avoiding any adverse effects on these resources. Adverse impacts other than pollution resulting from leaching from the stored materials to water or land are not required to be taken into account.

If dredged materials are considered polluted soil, they must be disposed of according to 18 AAC 60.025. In this case, the disposed waste is not allowed to be leached or washed into nearby surface water; cause a threat to the public health, safety or welfare, or to the environment; institutional controls must be in place for long term protection of the public health, safety or welfare, and a practical potential may not exist for migration of a hazardous constituent from the landfill to an aquifer of resource value during the landfill’s active life. This regulation applies only to polluted soil, and not to all dredged materials.

18 AAC 60.230 protects wildlife from disease vectors associated with solid waste management. It also requires solid waste management facilities to be managed so that wildlife do not endanger public health and so that access to the facility by wildlife is minimized. This regulation does not address affects to wildlife habitat from stored dredged materials.

18 AAC 60.233 requires that a solid waste facility maintain a minimum setback from the waste treatment area of 50 feet from the property line of the facility. It also requires that dust, odor, noise, traffic and other effects from operation of the facility do not become a nuisance or hazard to the public health, safety, or welfare. These requirements address human health, safety and welfare only; there is no provision for fish and wildlife or their habitats..

18 AAC 70.015 requires that water quality necessary to protect existing uses must be maintained and protected, including water quality necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water. The regulation gives DEC

discretion in application of the antidegradation policy of the state. It does not address the impacts other than water quality of discharging dredged and fill materials into, or storing dredged materials near fish and wildlife habitat.

Unique Concern: Commercial fishing is the economic mainstay of communities in the district, and healthy stocks of fish and other marine life are critical to the district's residents. Also, ADF&G recognizes that subsistence fishing has long been an important food gathering activity for the people of the Kodiak Island Borough.. A wide variety of freshwater and marine fish and shellfish are harvested for subsistence.. ADF&G has identified as the first priority for sustainable management of subsistence and commercial fisheries that wild salmon and their habitats must be protected to maintain resource productivity. ADF&G also prioritizes the establishment of effective salmon management systems that regulate human activities that affect salmon. Further detail may be found in the Resource Analysis, Sections 5.6.3.4 and 5.2.7.1.

Policy B-5: Estuaries and Lagoons

a. Dredge and fill operations, shoreline alteration, and obstructions to circulation and fish passage, are prohibited in estuaries and lagoons.

b. This policy is established for the Coastal Development standard (11 AAC 112.200) subject use. It applies to all uses and activities related to siting of facilities or placement of dredged or fill material into coastal waters.

Note: No part of this policy was approved in the final plan. The Final Recommendation to the Commissioner found that the statewide Habitats standard adequately addressed the matter.

Subject Use: Coastal development. 11 AAC 112.200

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). The policy is clear and concise regarding the requirements, the activities and the persons affected by it. The policy establishes that dredge and fill operations, shoreline alteration, and obstructions to circulation and fish passage are an improper use in estuaries and lagoons in the KIB under 11 AAC 114.260.

Defined Area: This policy applies to a defined portion of the coastal zone, the area in or adjacent to coastal waters.

Sensitivity to Development: Estuaries and lagoons are among the most valuable and productive habitats in the KIB. Estuaries are vital rearing and feeding areas for fish, waterfowl, seabirds, marine mammals, shellfish, and other marine life. These highly productive areas, where freshwater and saltwater mix, are crucial to the maintenance of salmon and char populations. Lagoons provide vital molting and staging areas for thousands of migrating waterfowl, and important feeding areas for birds, marine mammals, and fish. Dredging and filling operations affect coastal resources through physical destruction of habitat, increasing turbidity and decreasing oxygen levels in the water, sedimentation, and modification of water circulation patterns. Shoreline alterations may result in reduction or outright destruction of habitat, erosion or accretion, and affect circulation patterns. Shoreline modifications can also increase the impacts

from storm surges. Further information on these impacts may be found in the resource inventory and analysis at Section 5.6.3.4.

Not Adequately Addressed: State and federal statutes and regulations do not adequately address the subject of this policy. While impacts from some uses and activities conducted in estuaries and lagoons are regulated, there are no regulations which specifically disallow dredge and fill operations, shoreline alteration, and obstructions to circulation and fish passage in these areas.

Federal authorities governing discharges of dredged or fill material into the waters of the United States (33 CFR Part 323 and 33 CFR Part 325) require permits for work that includes such discharges. The Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material names significantly adverse effects of such discharges and states that these will not be permitted “unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem.” The permitting agency has discretion to determine whether applicant-proposed measures to reduce impacts are appropriate and practicable on a case-specific basis.

AS 16.10.010 requires that a person apply for and obtain a permit from the DEC before (1) obstructing, diverting or polluting waters of the state, either fresh or salt, utilized by salmon in the propagation of the species by placing any of the listed pollutants or debris (including dredged or fill materials) into those waters; (2) erecting a dam, barricade, or obstruction to retard...divert the waters that would affect the free ingress or egress of salmon into those waters,; or (3) render the waters described in section (1) as inaccessible or uninhabitable for salmon spawning or propagation.

This regulation requires permitting by DEC for dredging or filling in waters used by salmon for propagation; it does not describe specific measures for minimization of the adverse impacts listed within the regulation, thus lacking the specificity of this KIB policy. This regulation also applies only to activities that may affect salmon and not to effects on other coastal resources such as marine birds and mammals, other fish species, or the living resources upon which they depend.

Unique Concern: Estuaries and lagoons are critical habitat for many of the species upon which KIB residents depend for subsistence and for commercial fishing, and other activities. Commercial fishing is the predominant human activity in the northern Gulf of Alaska and the KIB economy is dependent on it. Section 5.7.2

Policy C-1: Erosion and Landslides

a. Upland habitats shall be managed to minimize erosion that may cause adverse impacts to adjacent habitat and the functions that support their productivity. Development and resource extraction activities shall:

- 1. Minimize removal of existing vegetative cover in erosion-prone areas or areas subject to mass wasting,*
- 2. Stabilize soils and re-vegetate with native species for areas where development necessitates removal of vegetation, unless re-vegetation activities would cause more damage, and*

3. *Be sited and constructed to minimize accelerated coastal erosion, or adverse impacts to other coastal processes which could contribute to increased natural hazards.*

b. Gravel extraction shall not be located in the following areas designated as landslide hazard areas: Old Womans Mountain, Pillar Mountain and Pasagshak.

c. Subsection a applies to areas designated as erosion hazards under 11 AAC 114.250(b) as described in Section 4.5.2. Subsection b applies to areas designated as landslide hazard areas under 11 AAC 114.250(b) as described in Section 4.5.2.

Note: This policy was revised substantially in response to comments in the Preliminary Recommendation to the Commissioner. The Final Recommendation to the Commissioner approved parts of the revised policy and found other parts of the policy unapprovable.

Subject Use: 11 AAC 114.250(b)

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). The policy is clear and concise regarding the requirements, the activities and the persons affected by it. It is precise and prescriptive, and it adds predictability for applicants.

Defined Area: This policy applies to a defined portion of the coastal zone because it applies to areas designated as erosion or mass wasting hazard areas under the state standard.

Sensitivity to Development: Introduction of soil and debris to fish habitat and other water bodies from soil wasting events smothers vegetation used for food and habitat by wildlife. Eroded banks and uplands that are stripped of vegetation are at risk of further erosion and harmful impacts to water bodies. Eroded banks offer opportunity for invasive plant species to colonize an area. Alteration to streams can result in habitat impacts, including loss of the substrate important for spawning, alteration in the flow of water, changes to stream velocity, depth and gradient and other impacts to a stream's fish bearing capacity. Section 5.6.3.4.

Not Adequately Addressed: State and federal statutes and regulations do not adequately address soil wasting hazards in uplands.

11 AAC 112.210 (c) requires that development in a natural hazard area may not be found consistent unless the applicant has taken appropriate measures in the siting, design, construction and operation of the proposed activity to protect public safety, services and the environment from potential damage caused by known hazards. Section (d) states that for purposes of (c) of this section, such appropriate measures are those determined by the coordinating agency in consultation with relevant agencies, satisfy relevant codes and safety standards or, in the absence of such codes and standards the project plans are approved by an engineer who is registered in the state and has engineering experience concerning the specific natural hazards, or the level of risk presented by the design of the project is low and appropriately addressed by the project plans. This statewide standard is general in its application to the potential effects of natural hazards; it protects "the environment." It does not state that policies that flow from the standard may not be more specific in their requirements of project applicants. This policy is more precise and prescriptive and provides greater predictability for applicants than the broad, general state standard.

Development activities that are expected to discharge fill material into the waters of the United States are subject to federal authorities (40 CFR Part 230, 33 CFR Part 323, 33 CFR Part 325). However, for work performed in uplands, the U.S. Army Corps of Engineers may not require a permit application from an applicant, and any conditions placed upon a project under these authorities are at the discretion of the federal agency. Thus this policy is more specific than federal law.

The Office of Habitat Management and Permitting administers AS 41.14.840 (Fishway Act) and AS 41.14.870 (Anadromous Fish Act). Although a wasting event could cause harmful impacts to anadromous streams, these are confined to the area between the banks of a stream and OHMP is unable to regulate activities on uplands..

Unique Concern: The KIB lies within one of the most active tectonic zones in North America and is subject to earthquakes and tsunamis, which raises exceptional risks of mass wasting events. The district is also subject to landslides and avalanches due to its mountainous slopes and rainy climate. Section 5.10.

Policy C-2: Design and Siting Criteria

a. Applicants for developments in designated hazard areas shall include measures in the project description that incorporate geological, seismologic, geomorphologic, hydrologic, and geotechnical information to ensure that the design, construction, and operation of facilities will minimize property damage and impacts to the environment and to protect against injury or loss of life.

b. Applicants for commercial developments in erosion and flooding hazard areas, and for developments in areas with loosely consolidated fill, shall ensure that geo-technical investigations are completed by an engineer experienced in the hazard.

c. Subsection a of this policy applies to all areas designated as natural hazard areas 11 AAC 114.250(b) as described in Section 4.5.2. Subsection b applies to erosion and flooding hazard areas designated as natural hazard areas 11 AAC 114.250(b) as described in Section 4.5.2.

Note: This policy was modified in response to comments in the Preliminary Recommendation to the Commissioner. No parts of the revised policy were recommended for approval in the Final Recommendation to the Commissioner.

Subject Use: 11 AAC 114.250(b)

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). The policy is clear and concise regarding the requirements, the activities and the persons affected by it. It is precise and prescriptive, and it adds predictability for applicants.

Defined Area: This policy applies to a defined portion of the coastal zone because it applies to areas designated as natural hazard areas under 11 AAC 114.270.

Sensitivity to Development: The KIB is in one of the most active tectonic zones in North America. Since 1867, there have been at least two dozen major earthquakes, and two tsunamis

were reported in the 20th century. Major damage was sustained in some communities during the 1964 Alaska earthquake. Volcanic eruptions along the Alaska Peninsula can cause impacts in the district. Landslide and avalanche risk is high, as is the potential for flooding and erosion, as documented in Section 5.10.

Not Adequately Addressed: State and federal statutes and regulations do not adequately address design and siting criteria in known natural hazard areas.

11 AAC 112.210 (c) requires that development in a natural hazard area may not be found consistent unless the applicant has taken appropriate measures in the siting, design, construction and operation of the proposed activity to protect public safety, services and the environment from potential damage caused by known hazards. Section (d) states that for purposes of (c) of this section, such appropriate measures are those determined by the coordinating agency in consultation with relevant agencies, satisfy relevant codes and safety standards or, in the absence of such codes and standards the project plans are approved by an engineer who is registered in the state and has engineering experience concerning the specific natural hazards, or the level of risk presented by the design of the project is low and appropriately addressed by the project plans. This statewide standard is general in its application to the potential effects of natural hazards; it protects “the environment.” It does not state that policies that flow from the standard may not be more specific in their requirements of project applicants. This policy is more precise and prescriptive and provides greater predictability for applicants than the broad, general state standard.

There are no federal standards for design and siting in known natural hazard areas.

Unique Concern: The high potential for earthquakes and tsunamis, and erosion, landslide and avalanche risks in the KIB argue a compelling need for adequate planning and design for development in the district. Section 5.10.

Policy C-3: Stream Flooding

a. Residential development shall not be located within the high water mark of record, or within 50-feet from the mean high water mark of waterbodies if there is no high water mark of record, unless the applicant demonstrates that measures in the project description will protect structures from flood damage.

b. Industrial and commercial development shall not be sited within the annual floodplain or high water channels of streams unless there is no practicable alternative. Where siting of commercial development within this area is unavoidable, structures must be designed and constructed to minimize property damage and impacts to the stream environment and to protect against injury or loss of life.

c. This policy applies to areas designated as flood hazard areas under 11 AAC 114.250(b) as described in Section 4.5.2.

Note: This policy was revised in response to comments in the Preliminary Recommendation to the Commissioner. No parts of the revised policy were approved in the Final Recommendation to the Commissioner.

Subject Use: 11 AAC 114.250(b)

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). The policy is clear and concise regarding the requirements, the activities and the persons affected by it. It provides more specificity to the statewide standard because it

Defined Area: This policy applies to a defined portion of the coastal zone because it applies to areas designated as natural hazard areas under 11 AAC 114.250.

Sensitivity to Development: Many coastal developments are water-dependent, water-related or a location adjacent to water is desirable. Structures located on the floodplain or below the high water mark of record of a water body are at risk for flooding during high water events.

Not Adequately Addressed: State and federal statutes and regulations do not adequately address stream flooding and associated hazards.

11 AAC 112.210 (c) requires that development in a natural hazard area may not be found consistent unless the applicant has taken appropriate measures in the siting, design, construction and operation of the proposed activity to protect public safety, services and the environment from potential damage caused by known hazards. Section (d) states that for purposes of (c) of this section, such appropriate measures are those determined by the coordinating agency in consultation with relevant agencies, satisfy relevant codes and safety standards or, in the absence of such codes and standards the project plans are approved by an engineer who is registered in the state and has engineering experience concerning the specific natural hazards, or the level of risk presented by the design of the project is low and appropriately addressed by the project plans. This statewide standard is general in its application to the potential effects of natural hazards; it protects “the environment.” It does not state that policies that flow from the standard may not be more specific in their requirements of project applicants. This policy is more precise and prescriptive and provides greater predictability for applicants than the broad, general state standard. There are no federal standards for design and siting in known natural hazard areas.

Unique Concern: Flood risks in the KIB are posed by rivers and by coastal surges and tsunamis.

Policy C-4: Seismic Hazards

*a. **Earthquake Shaking, Strong Ground Motion:** For structures or facilities essential to public health and safety and structures or facilities essential for transportation, communication, or emergency response to damaging earthquakes and structures and facilities containing substances that pose potential significant adverse effects to the public or environment in the event of damage due to earthquake shaking:*

- 1. Applicants shall include measures in the project description to demonstrate that such structures and facilities shall be sited, designed, constructed, and operated to resist damage from strong shaking from earthquakes.*
- 2. Applicants shall include a site-specific analysis in the project description of the level of potential ground motions using current standards of*

practice for geologic, seismologic, geotechnical, and engineering analysis.

b. Surface Faulting: *No structure or facility used for human occupancy or structure or facility containing hazardous materials or structure or facility essential for emergency response to a damaging earthquake will be located on or within 50 feet of the surface trace of an active fault.*

Where facilities such as public roads, utilities, pipelines, or other facilities and structures containing or transporting substances that pose potential significant adverse effects to the public or the environment in the event of damage due to surface fault rupture or structures or facilities necessary for emergency response in the event of a damaging earthquake cross active faults, the structures or facilities must be above ground and designed, constructed, and operated to accommodate surface fault rupture without failure to the extent possible.

c. Earthquake Induced Liquefaction, Ground Failure and Lateral Spreading: *No structures or facilities shall be sited on liquefiable soils or sediments if such structures or facilities or materials within these facilities would result in significant damage. Applicants shall conduct a site-specific analysis of the liquefaction potential of soils and sediments for siting of all critical or hazardous structures and facilities.*

d. Earthquake Induced Landslides: *No critical or hazardous structure or facility will be sited on or adjacent to slopes with potential for earthquake induced slope failure. Applicants shall conduct a site-specific analysis of earthquake induced landslide potential for siting of all critical or hazardous structures and facilities.*

e. Earthquake induces subsidence: *No critical or hazardous structure or facility will be sited on coastal land within 10 vertical feet of the extreme high tide elevation.*

f. *This policy applies to areas designated as earthquake hazards under 11 AAC 114.250(b) as described in Section 4.5.2.*

Note: No part of this policy was recommended for approval in the Final Recommendation to the Commissioner. The policy language was created with the assistance of hazard management expert Gary Carver.

Subject Use: 11 AAC 114.250(h)

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). The policy is clear and concise regarding the requirements, the activities and the persons affected by it. It is precise and prescriptive, and it adds predictability for applicants.

Defined Area: This policy applies to a defined portion of the coastal zone because it applies to areas designated as natural hazard areas under 11 AAC 114.270.

Sensitivity to Development: The KIB is in one of the most active tectonic zones in North America. Since 1867, there have been at least two dozen major earthquakes, and two tsunamis were reported in the 20th century. Major damage was sustained in some communities during the 1964 Alaska earthquake. Volcanic eruptions along the Alaska Peninsula can cause impacts in the district. Landslide and avalanche risk is high, as is the potential for flooding and erosion, as documented in Section 5.10.

Not Adequately Addressed: State and federal statutes and regulations do not adequately address design and siting criteria in known natural hazard areas.

11 AAC 112.210 (c) requires that development in a natural hazard area may not be found consistent unless the applicant has taken appropriate measures in the siting, design, construction and operation of the proposed activity to protect public safety, services and the environment from potential damage caused by known hazards. Section (d) states that for purposes of (c) of this section, such appropriate measures are those determined by the coordinating agency in consultation with relevant agencies, satisfy relevant codes and safety standards or, in the absence of such codes and standards the project plans are approved by an engineer who is registered in the state and has engineering experience concerning the specific natural hazards, or the level of risk presented by the design of the project is low and appropriately addressed by the project plans. This statewide standard is general in its application to the potential effects of natural hazards; it protects “the environment.” It does not state that policies that flow from the standard may not be more specific in their requirements of project applicants. This policy is more precise and prescriptive and provides greater predictability for applicants than the broad, general state standard.

There are no federal standards for design and siting in known natural hazard areas.

Unique Concern: The high potential for earthquakes and tsunamis, and erosion, landslide and avalanche risks in the KIB argue a compelling need for adequate planning and design for development in the district. Section 5.10.

Policy C-5: Tsunamis and Seiches

- a. No critical or hazardous structure or facility will be sited on coastal land within the run-up zone of the 1964 tsunami. If the 1964 run-up elevation can not be determined for the site, critical or hazardous structures or facilities will be located a minimum of 60 feet above the extreme high tide elevation.*
- b. No critical or hazardous structure or facility will be sited where there is a reasonable probability of an earthquake induced landslides entering the ocean and generating a seich or wave that could inundate the structure or facility.*
- c. This policy applies to areas designated as Tsunami hazard areas under 11 AAC 114.250(b) as described in Section 4.5.2.*

Note: No part of this policy was recommended for approval in the Final Recommendation to the Commissioner. The policy language was created with the assistance of hazard management expert Gary Carver.

Subject Use: 11 AAC 114.250(h)

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). The policy is clear and concise regarding the requirements, the activities and the persons affected by it. It is precise and prescriptive, and it adds predictability for applicants.

Defined Area: This policy applies to a defined portion of the coastal zone because it applies to areas designated as natural hazard areas under 11 AAC 114.270.

Sensitivity to Development: The KIB is in one of the most active tectonic zones in North America. Since 1867, there have been at least two dozen major earthquakes, and two tsunamis were reported in the 20th century. Major damage was sustained in some communities during the 1964 Alaska earthquake. Volcanic eruptions along the Alaska Peninsula can cause impacts in the district. Landslide and avalanche risk is high, as is the potential for flooding and erosion, as documented in Section 5.10.

Not Adequately Addressed: State and federal statutes and regulations do not adequately address design and siting criteria in known natural hazard areas.

11 AAC 112.210 (c) requires that development in a natural hazard area may not be found consistent unless the applicant has taken appropriate measures in the siting, design, construction and operation of the proposed activity to protect public safety, services and the environment from potential damage caused by known hazards. Section (d) states that for purposes of (c) of this section, such appropriate measures are those determined by the coordinating agency in consultation with relevant agencies, satisfy relevant codes and safety standards or, in the absence of such codes and standards the project plans are approved by an engineer who is registered in the state and has engineering experience concerning the specific natural hazards, or the level of risk presented by the design of the project is low and appropriately addressed by the project plans. This statewide standard is general in its application to the potential effects of natural hazards; it protects “the environment.” It does not state that policies that flow from the standard may not be more specific in their requirements of project applicants. This policy is more precise and prescriptive and provides greater predictability for applicants than the broad, general state standard.

There are no federal standards for design and siting in known natural hazard areas.

Unique Concern: The high potential for earthquakes and tsunamis, and erosion, landslide and avalanche risks in the KIB argue a compelling need for adequate planning and design for development in the district. Section 5.10.

Policy C-6: Slope Instability

a. No structures or facilities essential to public health and safety and structures or facilities essential for emergency response and facilities containing hazardous substances that pose significant adverse effects to the public or environment in the

event of damage from slope instability will be sited where slope instability could impact such structures or facilities.

b. Applicants shall include an analysis of the site-specific potential for slope instability from natural slope conditions or slope instability resulting from modification of the land surface or alteration of the hydrology of slopes for all structures and facilities essential to public health and safety and structures or facilities essential for emergency response and facilities containing hazardous substances that pose significant adverse effects to the public or environment in the event of damage from slope instability.

c. This policy applies to areas designated as landslide hazard areas under 11 AAC 114.250(b) as described in Section 4.5.2.

Note: No part of this policy was recommended for approval in the Final Recommendation to the Commissioner. The policy language was created with the assistance of hazard management expert Gary Carver.

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). The policy is clear and concise regarding the requirements, the activities and the persons affected by it. It is precise and prescriptive, and it adds predictability for applicants.

Defined Area: This policy applies to a defined portion of the coastal zone because it applies to areas designated as natural hazard areas under 11 AAC 114.270.

Sensitivity to Development: The KIB is in one of the most active tectonic zones in North America. Since 1867, there have been at least two dozen major earthquakes, and two tsunamis were reported in the 20th century. Major damage was sustained in some communities during the 1964 Alaska earthquake. Volcanic eruptions along the Alaska Peninsula can cause impacts in the district. Landslide and avalanche risk is high, as is the potential for flooding and erosion, as documented in Section 5.10.

Not Adequately Addressed: State and federal statutes and regulations do not adequately address design and siting criteria in known natural hazard areas.

11 AAC 112.210 (c) requires that development in a natural hazard area may not be found consistent unless the applicant has taken appropriate measures in the siting, design, construction and operation of the proposed activity to protect public safety, services and the environment from potential damage caused by known hazards. Section (d) states that for purposes of (c) of this section, such appropriate measures are those determined by the coordinating agency in consultation with relevant agencies, satisfy relevant codes and safety standards or, in the absence of such codes and standards the project plans are approved by an engineer who is registered in the state and has engineering experience concerning the specific natural hazards, or the level of risk presented by the design of the project is low and appropriately addressed by the project plans. This statewide standard is general in its application to the potential effects of natural hazards; it protects “the environment.” It does not state that policies that flow from the standard may not be more specific in their requirements of project applicants. This policy is more precise and

prescriptive and provides greater predictability for applicants than the broad, general state standard.

There are no federal standards for design and siting in known natural hazard areas.

Unique Concern: The high potential for earthquakes and tsunamis, and erosion, landslide and avalanche risks in the KIB argue a compelling need for adequate planning and design for development in the district. Section 5.10.

Policy D-1: Maintenance of Fish Habitat

a. All stream or lake bank cuts, fills or exposed earthwork adjacent to anadromous and resident fish streams, wetlands or marine waters shall be stabilized to prevent soil deposition in adjoining waters during construction, operation and following abandonment of development activities. Stabilization will not be required in situations where the KIB determines more harm would occur from stabilization efforts.

b. Rehabilitation of disturbed fish streams shall ensure that their special productivity is maintained including spawning, migration, rearing, and overwintering areas. Stream features that support fish productivity, such as banks, beaches, logs, and beds, shall be replaced.

c. This policy applies to uses and activities in areas designated as important habitat under 11 AAC 114.250(h) as described in Section 4.5.3.

Note: The KIB revised this policy in response to comments on the Preliminary Recommendation to the Commissioner. The Final Recommendation to the Commissioner recommended the revised policy not be approved.

Subject Use: 11 AAC 114.250(h)

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). The policy is clear and concise regarding the requirements, the activities and the persons affected by it. The policy describes the conditions an applicant must meet to minimize significant adverse impacts to anadromous fish streams.

Defined Area: This policy applies to a defined portion of the coastal zone because it applies to the anadromous fish streams designated by the KIB as important habitat and described in Chapter 5.

Sensitivity to Development: Anadromous fish are keystone species upon which many other animals and humans in the KIB depend. They are also bellwether species by which the health of ecosystems can be measured. Anadromous fish habitat in fresh and marine waters can be adversely impacted by a wide range of development activities, including direct physical destruction of intertidal, wetland, upland or benthic habitat and effects to the organisms that depend on these habitats. Any activity that results in the introduction of pollutants, including runoff, sedimentation, soil deposition, leaching of chemicals, etc, may adversely impact fish habitats. Additionally, the introduction of non-native species may result in a change in predator-prey relationships, shoreline or stream channel modification or other changes to the landscape may

modify water flow, circulation, quantity, temperature and other conditions that affect the health of anadromous fish habitat. The relationship between fresh and salt water systems vital to the health of anadromous fish habitat may be affected by development on or offshore, or even inland. The sensitivity to development is discussed in more detail in the resource analysis in Sections 5.6.3.3 and 5.6.3.4.

Not Adequately Addressed: State and federal laws do not adequately address protection of this important habitat because the relevant laws do not require specific prescriptive measures, rely on agency discretion to assign Best Management Practices (BMPs) such as the ones listed in this policy, and because they do not provide predictability for applicants.

The Office of Habitat Management and Permitting administers AS 41.14.840 (Fishway Act) and AS 41.14.870 (Anadromous Fish Act).

Regarding obstructions to fish streams, AS 41.14.840 is inadequate because it only applies when “the deputy commissioner considers it necessary.” Rather than requiring anything, this statute only allows the Alaska Department of Natural Resources to require a fishway and a device for passage of downstream migrating fish. Because implementation of this statute is completely discretionary, it is inadequate.

AS 41.14.870 has four subsections. Subsection (a) requires specification of rivers, lakes and streams that are important for the spawning, rearing or migration of anadromous fish. The Fish Distribution Database created by the Alaska Department of Fish and Game is part of the coastal management plan in Appendix G. Subsection (b) requires notification to the deputy commissioner for projects that “construct a hydraulic project, or use, divert, obstruct, pollute, or change the natural flow or bed of a specified river, lake, or stream, or use wheeled, tracked, or excavating equipment or log-dragging equipment in the bed of a specified river, lake, or stream . . .” Subsection (c) provides the deputy commissioner the discretion to require information about the project, including full plans and specifications. Subsection (d) gives the deputy commissioner the discretion to find “the plans and specifications insufficient for the proper protection of fish and game. This statute is insufficient because subsections (c) and (d) are discretionary and because it does not provide specificity about what entail “proper protection of fish and game.”

The statewide ACMP Habitats standard (11 AAC 112.300) has three subsections. Subsection (a) lists 9 types of habitats subject to the program. This subsection does not specifically list upland habitats. While upland habitats could be designated as important habitats, there is no guarantee that habitats important habitats designated by the district would be approved by DNR.

Subsection (b) of the Habitats standard specifies management measures that apply to the habitats identified in subsection (a). While DNR response to the Public Review Draft of the coastal management plan imply that these are the exclusive management measures for habitats under the ACMP, the standard does not expressly limit enforceable policies from addressing aspects of the habitats other than what is specified in part (b). In fact, although the management measures for this subsection have been modified, under the previous standard, coastal management issues were never limited to these measures. Management measures listed for each type of habitat are extremely limited, and except for a few habitat types, the measures do not address living organisms that depend on the productivity of the habitat to survive.

Federal authorities governing discharges of dredged or fill material into the waters of the United States. 33 CFR Part 323 and 33 CFR Part 325 require permits for work that includes such

discharges. The Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material names significantly adverse effects of such discharges and states that these will not be permitted “unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem.” The permitting agency has discretion to determine whether applicant-proposed measures to reduce impacts are appropriate and practicable on a case-specific basis.

Unique Concern: The important habitat, anadromous fish streams, addressed by this policy is a unique concern to the KIB because of the human dependence on this resource as documented in Section 5.7. This unique concern of this resource is discussed in the Resource Analysis in Section 5.6.3.4.

Policy D-2: Anadromous Fish Waters

a. No development activities, removal or destruction of natural vegetation, excavation, placement of fill, or other land clearing shall take place within a minimum of 50 feet from the ordinary high water mark of anadromous fish waters unless the applicant demonstrates that variations in the setback are necessary for the following uses:

- 1. Transportation and utility crossings, including trails,*
- 2. Water dependent structures, including fish weirs,*
- 3. Uses involving the research, protection or enhancement of anadromous fish or their habitats,*
- 4. Timber harvesting activities subject to the Forest Practices Act, and*
- 5. Projects that meet the requirements in subsection b of this policy.*

b. Where there is no practicable alternative and a significant public need for a project, activities may occur within 50 feet of the ordinary high water mark of anadromous fish streams if the applicant demonstrates that consideration of the following factors demonstrates that there will be no or insignificant adverse impacts to fish and wildlife habitat:

- 1. The presence and sensitivity of anadromous fish using the site,*
- 2. The nature and timing of the proposed activity or anticipated disturbance, including construction, operation and following abandonment of development activities,*
- 3. The characteristics and function of existing riparian vegetation,*
- 4. The slope, soil type and soil stability at the proposed activity site as it affects the potential for erosion problems, and*
- 5. The impact on stream discharge.*

c. This policy applies to the area 50-feet from anadromous fish waters designated as important habitat areas under 11 AAC 114.250(h) as described in Section 4.5.3.

Note: The KIB revised this policy in response to comments on the Preliminary Recommendation to the Commissioner. The Final Recommendation to the Commissioner recommended the revised policy not be approved.

Subject Use: 11 AAC 114.250(h)

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). The policy is clear and concise regarding the requirements, the activities and the persons affected by it. The policy describes the conditions an applicant must meet to minimize significant adverse impacts to anadromous fish streams.

Defined Area: This policy applies to a defined portion of the coastal zone because it applies to the anadromous fish streams designated by the KIB as important habitat and described in Chapter 5.

Sensitivity to Development: Anadromous fish streams in the KIB are sensitive to development because of their importance to fish at critical life stages, and because of the importance of healthy anadromous fish stocks to the coastal district residents. The sensitivity to development is discussed in more detail in the resource analysis in Section 5.6.3.4.

Not Adequately Addressed: State and federal laws do not adequately address protection of this important habitat because the relevant laws do not require specific prescriptive measures, rely on agency discretion to assign Best Management Practices (BMPs) such as the ones listed in this policy, and because they do not provide predictability for applicants.

The Office of Habitat Management and Permitting administers AS 41.14.840 (Fishway Act) and AS 41.14.870 (Anadromous Fish Act).

Regarding obstructions to fish streams, AS 41.14.840 is inadequate because it only applies when “the deputy commissioner considers it necessary.” Rather than requiring anything, this statute only allows the Alaska Department of Natural Resources to require a fishway and a device for passage of downstream migrating fish. Because implementation of this statute is completely discretionary, it is inadequate.

AS 41.14.870 has four subsections. Subsection (a) requires specification of rivers, lakes and streams that are important for the spawning, rearing or migration of anadromous fish. The Fish Distribution Database created by the Alaska Department of Fish and Game is part of the coastal management plan in Appendix G. Subsection (b) requires notification to the deputy commissioner for projects that “construct a hydraulic project, or use, divert, obstruct, pollute, or change the natural flow or bed of a specified river, lake, or stream, or use wheeled, tracked, or excavating equipment or log-dragging equipment in the bed of a specified river, lake, or stream . . .” Subsection (c) provides the deputy commissioner the discretion to require information about the project, including full plans and specifications. Subsection (d) gives the deputy commissioner the discretion to find “the plans and specifications insufficient for the proper protection of fish and game. This statute is insufficient because subsections (c) and (d) are discretionary and because it does not provide specificity about what entail “proper protection of fish and game.”

The statewide ACMP Habitats standard (11 AAC 112.300) has three subsections. Subsection (a) lists 9 types of habitats subject to the program. This subsection does not specifically list upland habitats. While upland habitats could be designated as important habitats, there is no guarantee that habitats important habitats designated by the district would be approved by DNR.

Subsection (b) of the Habitats standard specifies management measures that apply to the habitats identified in subsection (a). While DNR response to the Public Review Draft of the coastal management plan imply that these are the exclusive management measures for habitats under the

ACMP, the standard does not expressly limit enforceable policies from addressing aspects of the habitats other than what is specified in part (b). In fact, although the management measures for this subsection have been modified, under the previous standard, coastal management issues were never limited to these measures. Management measures listed for each type of habitat are extremely limited, and except for a few habitat types, the measures do not address living organisms that depend on the productivity of the habitat to survive.

Federal authorities governing discharges of dredged or fill material into the waters of the United States. 33 CFR Part 323 and 33 CFR Part 325 require permits for work that includes such discharges. The Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material names significantly adverse effects of such discharges and states that these will not be permitted “unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem.” The permitting agency has discretion to determine whether applicant-proposed measures to reduce impacts are appropriate and practicable on a case-specific basis.

Unique Concern: The important habitat, anadromous fish streams, addressed by this policy is a unique concern to the KIB because of the human dependence on this resource as documented in Section 5.7. This unique concern of this resource is discussed in the Resource Analysis in Section 5.6.3.4.

Policy D-3: Maintenance of Fish Passage and Stream Characteristics

- a. Development activities, facilities and structures shall be designed, sited, constructed, operated and maintained in a manner which does not impede or interfere with access to spawning streams by adult fish or instream movements of juvenile fish.*
- b. All cross drainage structures on fish streams, including bridges and culverts, shall:*
 - 1. Be sited, constructed and maintained to avoid changes to the direction or velocity of the stream flow and channel morphology,*
 - 2. Be adequately sized to accommodate the best available estimate of the high water mark of record without significantly interfering with the water volume, velocity, bedload transporter substrate characteristics of the stream,*
 - 3. Provide for efficient passage or movements of fish upstream, downstream and in associated aquatic habitats, including wetlands, and*
 - 4. Minimize disturbance of fish spawning habitat.*
- c. Applicants shall demonstrate in the project description how culverts will be monitored after project construction to ensure they do not block instream movements of fish.*
- d. This policy applies to fish waters designated as important habitat areas under 11 AAC 114.250(h) as described in Section 4.5.3.*

Note: The KIB revised this policy in response to comments on the Preliminary Recommendation to the Commissioner. The Final Recommendation to the Commissioner recommended the revised policy not be approved.

Subject Use: 11 AAC 114.250(h)

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). The policy is clear and concise regarding the requirements, the activities and the persons affected by it. It provides more specificity to the statewide standard.

Defined Area: This policy applies to a defined portion of the coastal zone because it applies to the areas designated a important habitat.

Sensitivity to Development: Anadromous fish are keystone species upon which many other animals and humans in the KIB depend. They are also bellwether species by which the health of ecosystems can be measured. Anadromous fish habitat in fresh and marine waters can be adversely impacted by a wide range of development activities, including direct physical destruction of intertidal, wetland, upland or benthic habitat and effects to the organisms that depend on these habitats. Any activity that results in the introduction of pollutants, including run-off, sedimentation, soil deposition, leaching of chemicals, etc, may adversely impact fish habitats. Additionally, the introduction of non-native species may result in a change in predator-prey relationships, shoreline or stream channel modification or other changes to the landscape may modify water flow, circulation, quantity, temperature and other conditions that affect the health of anadromous fish habitat. The relationship between fresh and salt water systems vital to the health of anadromous fish habitat may be affected by development on or offshore, or even inland. The sensitivity to development is discussed in more detail in the resource analysis in Sections 5.6.3.3 and 5.6.3.4.

Not Adequately Addressed: State and federal laws do not adequately address protection of this important habitat because the relevant laws do not require specific prescriptive measures, rely on agency discretion to assign Best Management Practices (BMPs) such as the ones listed in this policy, and because they do not provide predictability for applicants.

The Office of Habitat Management and Permitting administers AS 41.14.840 (Fishway Act) and AS 41.14.870 (Anadromous Fish Act).

Regarding obstructions to fish streams, AS 41.14.840 is inadequate because it only applies when “the deputy commissioner considers it necessary.” Rather than requiring anything, this statute only allows the Alaska Department of Natural Resources to require a fishway and a device for passage of downstream migrating fish. Because implementation of this statute is completely discretionary, it is inadequate.

AS 41.14.870 has four subsections. Subsection (a) requires specification of rivers, lakes and streams that are important for the spawning, rearing or migration of anadromous fish. The Fish Distribution Database created by the Alaska Department of Fish and Game is part of the coastal management plan in Appendix G. Subsection (b) requires notification to the deputy commissioner for projects that “construct a hydraulic project, or use, divert, obstruct, pollute, or change the natural flow or bed of a specified river, lake, or stream, or use wheeled, tracked, or excavating equipment or log-dragging equipment in the bed of a specified river, lake, or stream . . .” Subsection (c) provides the deputy commissioner the discretion to require information about the project, including full plans and specifications. Subsection (d) gives the deputy commissioner the discretion to find “the plans and specifications insufficient for the proper protection of fish and game. This statute is insufficient because subsections (c) and (d) are discretionary and because it does not provide specificity about what entail “proper protection of fish and game.”

The statewide ACMP Habitats standard (11 AAC 112.300) has three subsections. Subsection (a) lists 9 types of habitats subject to the program. This subsection does not specifically list upland habitats. While upland habitats could be designated as important habitats, there is no guarantee that habitats important habitats designated by the district would be approved by DNR.

Subsection (b) of the Habitats standard specifies management measures that apply to the habitats identified in subsection (a). While DNR response to the Public Review Draft of the coastal management plan imply that these are the exclusive management measures for habitats under the ACMP, the standard does not expressly limit enforceable policies from addressing aspects of the habitats other than what is specified in part (b). In fact, although the management measures for this subsection have been modified, under the previous standard, coastal management issues were never limited to these measures. Management measures listed for each type of habitat are extremely limited, and except for a few habitat types, the measures do not address living organisms that depend on the productivity of the habitat to survive.

Federal authorities governing discharges of dredged or fill material into the waters of the United States. 33 CFR Part 323 and 33 CFR Part 325 require permits for work that includes such discharges. The Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material names significantly adverse effects of such discharges and states that these will not be permitted “unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem.” The permitting agency has discretion to determine whether applicant-proposed measures to reduce impacts are appropriate and practicable on a case-specific basis.

Unique Concern: The important habitat, anadromous fish streams, addressed by this policy is a unique concern to the KIB because of the human dependence on this resource as documented in Section 5.7. This unique concern of this resource is discussed in the Resource Analysis in Section 5.6.3.4.

Policy D-4: Water Removal from Fish Streams

a. Water intake pipes used to remove water from fish-bearing waters shall use a screened enclosure so as to prevent fish entrainment and impingement. Pipes and screening will be designed, constructed, and maintained so that the maximum water velocity at the surface of the screen enclosure is not greater than 0.4 foot per second. Screen mesh size will not exceed 0.1 inch. Any modifications to this requirement may be approved only if the applicant provides convincing evidence, to the satisfaction of the Office of Habitat Management and Permitting, that these techniques will prevent the entrainment and impingement of fish.

b. Water removal shall not reduce high water flow below discharge necessary to maintain natural bed load sediment transport downstream from the water removal intake point.

c. This policy is established for fish waters designated as important habitat areas under 11 AAC 114.250(h) as described in Section 4.5.3. It applies to uses and activities related to water withdrawal.

Note: The KIB revised this policy in response to comments on the Preliminary Recommendation to the Commissioner. The Final Recommendation to the Commissioner recommended the revised policy not be approved.

Subject Use: 11 AAC 114.250(g)(h)

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). The policy is clear and concise regarding the requirements, the activities and the persons affected by it. The policy describes the conditions an applicant must meet to minimize significant adverse impacts to anadromous fish streams.

Defined Area: This policy applies to a defined portion of the coastal zone because it applies to the areas designated as important habitat and subsistence areas under 11 AAC 114.250(g) and (h).

Sensitivity to Development: Anadromous fish are keystone species upon which many other animals and humans in the KIB depend. They are also bellwether species by which the health of ecosystems can be measured. Anadromous fish habitat in fresh and marine waters can be adversely impacted by a wide range of development activities, including direct physical destruction of intertidal, wetland, upland or benthic habitat and effects to the organisms that depend on these habitats. Any activity that results in the introduction of pollutants, including runoff, sedimentation, soil deposition, leaching of chemicals, etc, may adversely impact fish habitats. Additionally, the introduction of non-native species may result in a change in predator-prey relationships, shoreline or stream channel modification or other changes to the landscape may modify water flow, circulation, quantity, temperature and other conditions that affect the health of anadromous fish habitat. The relationship between fresh and salt water systems vital to the health of anadromous fish habitat may be affected by development on or offshore, or even inland. The sensitivity to development is discussed in more detail in the resource analysis in Sections 5.6.3.3 and 5.6.3.4.

Not Adequately Addressed: State and federal laws do not adequately address protection of this important habitat because the relevant laws do not require specific prescriptive measures, rely on agency discretion to assign Best Management Practices (BMPs) such as the ones listed in this policy, and because they do not provide predictability for applicants.

The Office of Habitat Management and Permitting administers AS 41.14.840 (Fishway Act) and AS 41.14.870 (Anadromous Fish Act).

Regarding obstructions to fish streams, AS 41.14.840 is inadequate because it only applies when “the deputy commissioner considers it necessary.” Rather than requiring anything, this statute only allows the Alaska Department of Natural Resources to require a fishway and a device for passage of downstream migrating fish. Because implementation of this statute is completely discretionary, it is inadequate.

AS 41.14.870 has four subsections. Subsection (a) requires specification of rivers, lakes and streams that are important for the spawning, rearing or migration of anadromous fish. The Fish Distribution Database created by the Alaska Department of Fish and Game is part of the coastal management plan in Appendix G. Subsection (b) requires notification to the deputy commissioner for projects that “construct a hydraulic project, or use, divert, obstruct, pollute, or change the natural flow or bed of a specified river, lake, or stream, or use wheeled, tracked, or excavating

equipment or log-dragging equipment in the bed of a specified river, lake, or stream . . .”

Subsection (c) provides the deputy commissioner the discretion to require information about the project, including full plans and specifications. Subsection (d) gives the deputy commissioner the discretion to find “the plans and specifications insufficient for the proper protection of fish and game. This statute is insufficient because subsections (c) and (d) are discretionary and because it does not provide specificity about what entail “proper protection of fish and game.”

The statewide ACMP Habitats standard (11 AAC 112.300) has three subsections. Subsection (a) lists 9 types of habitats subject to the program. This subsection does not specifically list upland habitats. While upland habitats could be designated as important habitats, there is no guarantee that habitats important habitats designated by the district would be approved by DNR.

Subsection (b) of the Habitats standard specifies management measures that apply to the habitats identified in subsection (a). While DNR response to the Public Review Draft of the coastal management plan imply that these are the exclusive management measures for habitats under the ACMP, the standard does not expressly limit enforceable policies from addressing aspects of the habitats other than what is specified in part (b). In fact, although the management measures for this subsection have been modified, under the previous standard, coastal management issues were never limited to these measures. Management measures listed for each type of habitat are extremely limited, and except for a few habitat types, the measures do not address living organisms that depend on the productivity of the habitat to survive.

Federal authorities governing discharges of dredged or fill material into the waters of the United States. 33 CFR Part 323 and 33 CFR Part 325 require permits for work that includes such discharges. The Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material names significantly adverse effects of such discharges and states that these will not be permitted “unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem.” The permitting agency has discretion to determine whether applicant-proposed measures to reduce impacts are appropriate and practicable on a case-specific basis.

Unique Concern: The important habitat, anadromous fish streams, addressed by this policy is a unique concern to the KIB because of the human dependence on this resource as documented in Section 5.7. This unique concern of this resource is discussed in the Resource Analysis in Section 5.6.3.4.

Policy D-5: Wind Generation and Bird Habitat

a. The applicant shall incorporate measures into the project description regarding the siting, design, construction, and operation of wind generation projects to minimize mortality to birds. These measures shall include, but are not limited to, installation of turbines on the tallest towers practicable for the site, configuration of towers to reduce the likelihood of bird strikes, and use of tubular towers, fully enclosed nacelles or other appropriate technology that has been demonstrated to reduce bird mortality from wind turbines.

b. The applicant shall include information with the consistency certification about bird abundance and migratory bird traffic at the proposed site and a plan for monitoring bird casualties at the wind generation sites so that appropriate corrective measures may be developed if significant bird mortality occurs.

c. This policy applies to uses and activities that may affect onshore important habitat areas under 11 AAC 114.250(h) as described in Section 4.5.3. In this case, the uses and activities relate to wind generation facilities.

Note: The Final Recommendation to the Commissioner recommended this policy be approved if subsection b was removed.

Subject Use: Energy facilities. 11 AAC 112.230

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). The policy is clear and concise regarding the requirements, the activities and the persons affected by it. The policy describes the conditions an applicant must meet to minimize significant adverse impacts to raptors and migratory birds.

Defined Area: This policy applies to a defined portion of the coastal zone because it applies to energy facilities, specifically wind generation facilities, within the district boundaries.

Sensitivity to Development: Significant bird mortality, particularly among raptors, occurs at some wind generation sites. Facilities located along major bird migration routes experience higher numbers of bird casualties than facilities sited away from such routes. Birds are killed by direct contact with wind turbines. Some wind farms are attractive to predatory bird species because they provide potential perching and nesting sites and because the construction of the facility itself often provides burrowing habitat for prey species. Roads constructed for access draw in predators seeking road kill. The KIB has large amounts of habitat that are utilized by migrating birds for resting and staging areas, as well as for breeding and nesting. There are large resident populations of birds, including bald eagles, which may be at risk from wind energy facilities. Additional information about raptors and migratory birds may be found in the resource inventory and analysis in Sections 5.6.3.4 and 5.6.1 and about wind generation at Section 5.8.1.2.

Not Adequately Addressed: State and federal statutes and regulations do not adequately address wind energy siting, design, construction, and operation of wind energy facilities in regard to their potential impacts on birds, including protected bird species.

11 AAC 112.230(a) requires siting and approval of major energy facilities to be based, to the extent practicable, on several standards. These standards include siting facilities to minimize adverse environmental and social effects while satisfying industrial requirements, to minimize the probability, and so that design and construction of the facilities and support infrastructures in coastal areas will allow for the free passage and movement of fish and wildlife with due consideration for historic migratory patterns.

There is no state standard that would identify which wind energy facilities would be classified as “major” energy facilities. The energy facilities standard is broad and it does not address how applicants may minimize significant impacts; the district policy is more precise and prescriptive than the standard and establishes conditions applicants must meet in order to minimize adverse impacts to protected bird species.

The federal government protects migratory birds (16 USC 703, 712, 50 CFR 10, 13 & 21) and bald and golden eagles (16 USC 668a, 50 CFR 22). Unlawful takings of birds are prohibited under these statutes and regulations. While persons who are found to have committed an unlawful

taking of a protected bird species may be fined or incarcerated, the acts do not provide any specific requirements for applicants to avoid, minimize or mitigate takings. Federal agencies may, at their discretion, recommend measures to applicants for avoiding illegal takings, but they may not impose any.

Unique Concern: Wind energy is an important source of alternative energy for Alaska, including the KIB. High wind resources occur over the Aleutian Islands and the Alaska Peninsula; and offshore islands of the Gulf of Alaska. The KIB is also an important area for raptors and migratory birds, with heavy concentrations of birds at some seasons.

Policy D-6 Marine Mammal Haul-Outs and Seabird Colonies

a. Seabird colonies and haul-outs and rookeries used by marine mammals shall not be physically altered or disturbed by structures or activities in a manner that would preclude or significantly interfere with continued use of these sites by wildlife for the habitat functions which they provide. Development structures and facilities shall be sited at least one-half mile from identified seabird rookeries and marine mammal haul-outs. Development activities with high levels of acoustical or visual disturbance shall be designed and operated to minimize significant adverse impacts on seabird colonies and sea lion, fur seal and harbor seal haul-outs or rookeries.

b. This policy applies to marine mammal haul-outs and seabird colonies designated as important habitat areas under 11 AAC 114.250(h) as described in Section 4.5.3. It does not apply to manmade areas, such as docks, that may be used as haulouts.

Note: In response to comments in the Preliminary Recommendation to the Commissioner, the KIB revised this policy to disallow activities. No parts of the revised policy were recommended for approval in the Final Recommendation to the Commissioner, and the KIB removed the policy.

Subject Use: 11 AAC 114.250(g)(h)

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). It provides more specificity to the statewide standard because it is more precise than the statewide standard in addressing particular important habitats and subsistence uses. It is prescriptive because it provides specific conditions for applicants proposing projects in these areas, thus it also adds predictability to the ACMP process for applicants.

Defined Area: This policy applies to a defined portion of the coastal zone because it applies to designated areas for important habitat and subsistence within the coastal district boundary.

Sensitivity to Development: Seabirds nest on land, generally spending the rest of their lives at sea. Nesting areas are of critical importance. While nesting, seabirds are vulnerable to predation, noise, temperature and storms, availability of food, and physical impacts to nesting habitat. Alterations to nesting habitat while the birds are at sea may affect seabirds' ability to reproduce. Marine mammals are subject to many of the same effects when utilizing haulout sites. Both sets of animals are under pressure from influences outside of local control, which adds to their vulnerability. Seabirds are subject to avian diseases such as avian flu and West Nile virus, although neither has yet been confirmed in Alaska, but also to other infectious bird diseases. Climate change is affecting physical conditions in the environment, as well as food availability

and distribution, for seabirds and marine mammals alike. Persistent organic pesticides affect food, and migration adds another set of stresses. Marine traffic and construction, energy development and mining and other types of development also affect the habitats critical to these species, as documented in Section 5.6.3.2 and 5.6.3.4.

Not Adequately Addressed: State and federal statutes and regulations do not adequately address marine mammal haulouts and seabird colonies because there are no specific protections for their habitats under state or federal law.

The statewide ACMP Habitats standard (11 AAC 112.300) has three subsections. Subsection (a) lists 9 types of habitats subject to the program. This subsection does not specifically list upland habitats. While upland habitats could be designated as important habitats, there is no guarantee that habitats important habitats designated by the district would be approved by DNR.

Subsection (b) of the Habitats standard specifies management measures that apply to the habitats identified in subsection (a). While DNR response to the Public Review Draft of the coastal management plan imply that these are the exclusive management measures for habitats under the ACMP, the standard does not expressly limit enforceable policies from addressing aspects of the habitats other than what is specified in part (b). In fact, although the management measures for this subsection have been modified, under the previous standard, coastal management issues were never limited to these measures. Management measures listed for each type of habitat are extremely limited, and except for a few habitat types, the measures do not address living organisms that depend on the productivity of the habitat to survive.

There are federal regulations for migratory game bird hunting, an allowance for Alaska natives to take migratory birds that are not considered game birds, and provisions for other takings of migratory birds for educational and other purposes. (50 CFR 10, 13, & 21) These do not address habitat or living conditions.

Under the Marine Mammals Protection Act, marine mammals must be conserved. Federal agencies protect certain species and populations of marine mammals under the Act, (50 CFR 18) Federal agencies may develop and implement conservation measures to alleviate impacts on rookeries, mating grounds, or other areas of similar ecological significance, such a development is authorized, but not required, and no specific measures are required for the conservation of these species.

Unique Concern: The KIB is within the ranges of threatened or endangered species of marine mammals such as sea otters and Steller sea lions. The district provides important habitat for nesting populations of seabirds and feeding and resting areas for migratory seabirds, shorebirds and waterfowl. Section 5.6.3.2.

Policy D-7: Off-Road Access

a. Project-related off-road access shall occur only when surface disturbance and impacts to fragile soils and wetlands from off-road access can be prevented.

b. This policy is established for important habitat areas established under 11 AAC 114.250(H) as described in Section 4.5.3.

Note: The Final Recommendation to the Commissioner did not recommend this policy for approval, and the KIB removed it from the final plan.

Subject Use: 11 AAC 112.280

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). The policy is clear and concise regarding the requirements, the activities and the persons affected by it. The policy describes the conditions an applicant must meet to minimize significant adverse impacts to fragile soils and wetlands.

Defined Area: This policy applies to a defined portion of the coastal zone because it applies to areas affected by transportation routes and facilities in the KIB.

Sensitivity to Development: Fragile soils and wetlands are likely to be harmed by activities that disturb the surface, water flow and circulation, or which introduce sediments, pollutants, and other harmful substances. Impacts can include smothering, of vegetation important to wildlife and eventual loss of vegetative cover, introduction of invasive species, erosion, terrestrial habitat alteration, toxicity from pollutants, disruption of migration paths, and other harmful impacts. Section 5.6.3.4.

Not Adequately Addressed: State and federal statutes and regulations do not specifically address off-road access for project activities. Impacts such as those described by the policy are addressed by federal regulations only if soil disturbance or activities in wetlands result in a discharge of dredged or fill material under 33 CFR 323. Off-road activities that would result in the need for a discharge of dredged or fill materials permit would not be allowed under this policy. Similarly, there is no state rule disallowing off-road access for project work that would harm fragile soils or wetlands.

Unique Concern: Plant resources in the KIB provide sources of food for fish and wildlife, subsistence food and sources for medicinal treatments. Section 5.2.6.2. . Extensive tideflat-wetland complexes usually occur only at the heads of bays or around lagoons in the KIB, which increases their importance as habitat types. Large inland wetlands occur in the Karluk River and Ayakulik River drainages in southwestern Kodiak. Most of the Tugidak Island mainland is wetland habitat. Tideflat-wetland complexes provide valuable habitat for birds and marine mammals, particularly when used in combination with adjacent waters.

Policy D-8: Optimum Resource Use

a. The coordinating agency shall give maintenance and enhancement of the special productivity of fisheries habitat the highest priority when approving activities that may have reasonably foreseeable significant adverse impacts to important fisheries habitat functions related to fish migration routes or the recreational, subsistence or commercial harvest of fish.

b. This policy applies to all uses and activities that could affect areas designated as important habitat under 11 AAC 114.250(h) as described Section 4.5.3.

Note: This policy was removed from the plan in response to comments in the Preliminary Recommendation.

Subject Use: Important Habitat Areas (11 AAC 112.250(h))

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250(h)). The designated important habitat areas meet the requirements outlined in 11 AAC 114.250(h) as described in the justification for the designations at the beginning of this appendix.

The policy is clear and concise regarding the requirements, the activities and the persons affected by it. The policy establishes a priority for fisheries habitat, migration routes, and recreational, subsistence or commercial harvest of fish when there would be significant adverse impacts. The policy uses precise, prescriptive and enforceable language. Significant adverse impacts are defined in the plan. The policy is enforceable because when there is a question of priority; fisheries resources will be given the highest priority.

Defined Area: This policy applies to defined portions of the coastal zone, specifically, those areas designated as important habitat area and described in Chapter 5, Section 5.6.1.

Sensitivity to Development: The important habitat areas were designated because of their significant productivity as described in Chapter 5, Section 5.6.3.2 and their sensitivity as described in Section 5.6.3.2. Specifically, these important habitat areas are sensitive to activities that would alter fish migration routes and the ability to sustain recreational, subsistence or commercial harvest of the fish. The special productivity of the important habitats is specified in Section 5.6.1.

Not Adequately Addressed: State and federal laws do not adequately address protection of significant adverse impacts to subsistence because they do not provide for a fisheries priority.

Regarding obstructions to fish streams, AS 41.14.840 is inadequate because it only applies when “the deputy commissioner considers it necessary.” Rather than requiring anything, this statute only allows the Alaska Department of Natural Resources to require a fishway and a device for passage of downstream migrating fish. Because implementation of this statute is completely discretionary, it is inadequate.

AS 41.14.870 has four subsections. Subsection (a) requires specification of rivers, lakes and streams that are important for the spawning, rearing or migration of anadromous fish. The Fish Distribution Database created by the Alaska Department of Fish and Game is part of the coastal management plan in Appendix G. Subsection (b) requires notification to the deputy commissioner for projects that “construct a hydraulic project, or use, divert, obstruct, pollute, or change the natural flow or bed of a specified river, lake, or stream, or use wheeled, tracked, or excavating equipment or log-dragging equipment in the bed of a specified river, lake, or stream . . .” Subsection (c) provides the deputy commissioner the discretion to require information about the project, including full plans and specifications. Subsection (d) gives the deputy commissioner the discretion to find “the plans and specifications insufficient for the proper protection of fish and game. This statute is insufficient because subsections (c) and (d) are discretionary and because it does not provide specificity about what entail “proper protection of fish and game.”

The statewide ACMP Subsistence standard (11 AAC 112.300) has three subsections. Subsection (a) lists 9 types of habitats subject to the program. This subsection does not specifically list upland habitats. While upland habitats could be designated as important habitats, there is no guarantee that habitats important habitats designated by the district would be approved by DNR.

Subsection (b) of the Habitats standard specifies management measures that apply to the habitats identified in subsection (a). While DNR response to the Public Review Draft of the coastal management plan imply that these are the exclusive management measures for habitats under the ACMP, the standard does not specifically limit enforceable policies from addressing aspects of the habitats other than what is specified in part (b). In fact, although the management measures for this subsection have been modified, under the previous standard, coastal management issues were never limited to these measures. Management measures listed for each type of habitat are extremely limited, and expect for a few habitat types, the measures do not address living organisms that depend on the productivity of the habitat to survive.

Subsection (c) of the Habitats standard defines important habitat and riparian management areas.

The statewide Habitats standard is inadequate for a number of reasons. First, subsection (a) is inadequate because unlike the previous Habitats standard, it does not specifically list upland habitats. Second, subsection (b) only includes limited management measures, and for most of the habitats listed, there is no reference to living resources. Third, the Habitats standard is inadequate because it no longer contains a 3-part test for allowing project activities that cannot maintain or enhance fish habitat. Fourth, the “avoid, mitigate and minimize” requirements in subsection (b) are inadequate. As described in the next paragraph, the process is unpredictable, and it is not certain what habitat functions will be protected under this sequencing process.

The sequencing process to “avoid, minimize or mitigate” in 11 AAC 112.900 is inadequate for 5 reasons described in detail in the justification for policy A-1. The process has the potential to delay projects because it is confusing, terms are not defined, and it lacks predictability. Only the highlights of that discussion are repeated here.

- 1) The process for determining whether a project must to avoid or minimize adverse impacts is vague and it does not include consideration of adverse impacts too resource functions,
- 2) The specific requirements of the process are unclear because important terms are not defined (e.g., “maximum extent,” “functional values,” and “adverse impacts”),
- 2) The determination of “practicability” in the process does not take into account social, cultural and environmental factors,
- 4) The process does not consider cumulative impacts of the project in conjunction with other projects,
- 5) The state sequencing process only applies to 3 statewide standards: Habitats standard (11 AAC 112.300), Transportation Routes and Facilities (11 AAC 112.280), and Utility Routes and Facilities (11 AAC 112.240).

Unique Concern: Coastal habitats are a unique concern to the KIB because they support many of the uses and resources important to its residents including healthy fish and wildlife populations, subsistence harvests, clean air and water, recreation, commercial recreation and tourism, and sport hunting and fishing.

Policy D-9: Siting of Petroleum Storage Facilities

a. Unless there is no reasonable alternative, new commercial facilities, or existing commercial facilities being re-permitted for the storage, processing, or treatment of petroleum products of more than 1,000 gallons shall be sited a minimum of 1,500 feet from anadromous streams.

b. This policy applies to areas designated as important habitat areas under 11 AAC 114.250(h) as described in Section 4.5.3.

Note: This policy was revised slightly in response to comments in the Preliminary Recommendation to the Commissioner. The KIB removed it from the plan in response to comments in the Final Recommendation to the Commissioner.

Criteria: 11 AAC 114.250(h)

Defined Area: This policy applies to defined portions of the coastal zone, specifically, those areas designated as important habitat area and described in Chapter 5, Section 5.6.1.

Sensitivity to Development: The important habitat areas were designated because of their significant productivity as described in Chapter 5, Section 5.6.3.2 and their sensitivity as described in Section 5.6.3.2. Specifically, these important habitat areas are sensitive to activities that would alter fish migration routes and the ability to sustain recreational, subsistence or commercial harvest of the fish. The special productivity of the important habitats is specified in Section 5.6.1.

Not Adequately Addressed: State and federal laws do not adequately address siting of petroleum storage facilities near anadromous fish streams.

DEC responsibilities include oversight of pollution prevention and other requirements for petroleum production, processing and storage facilities. Under 18 AAC 75.007, petroleum facilities must be equipped and operated to prevent an oil discharge, and sets requirements for training, substance-free workplaces, facility security, and recordkeeping. Piping requirements for oil facilities are contained in 18 AAC 75.080 and mostly address integrity and security of pipelines. Neither regulation addresses siting near anadromous fish streams.

18 AAC 75.065 sets requirements for oil storage tanks, including maintenance and inspection, recordkeeping and reporting, design and installation requirements, and overfill prevention. The regulation does not address a separation distance from anadromous fish habitat.

18 AAC 80.020 requires a minimum separation distance of 200 feet from Class A and Class B public drinking water systems and 100 feet from Class C public water systems for petroleum lines and storage tanks of any capacity. In the event of petroleum or other hazardous substance spill, anadromous fish habitat would be significantly adversely affected. Impacts would affect water quality, but also the ability of the anadromous fish habitat to function and support anadromous fish. The 1,500-foot minimum separation distance of this policy is more specific in reducing risk to anadromous fish and their habitat than a 200-foot separation would be. Also, 18 AAC 80.020 applies to public drinking water systems and not to anadromous streams.

AS 41.14.870 has four subsections. Subsection (a) requires specification of rivers, lakes and streams that are important for the spawning, rearing or migration of anadromous fish. The Fish Distribution Database created by the Alaska Department of Fish and Game is part of the coastal management plan in Appendix F. Subsection (b) requires notification to the deputy commissioner for projects that “construct a hydraulic project, or use, divert, obstruct, pollute, or change the natural flow or bed of a specified river, lake, or stream, or

use wheeled, tracked, or excavating equipment or log-dragging equipment in the bed of a specified river, lake, or stream . . .” Subsection (c) provides the deputy commissioner the discretion to require information about the project, including full plans and specifications. Subsection (d) gives the deputy commissioner the discretion to find “the plans and specifications insufficient for the proper protection of fish and game. This statute is insufficient because subsections (c) and (d) are discretionary and because it does not provide specificity about what entail “proper protection of fish and game.”

There are no federal statutes or regulations for siting of petroleum facilities near anadromous fish streams.

Unique Concern: The important habitat, anadromous fish streams, addressed by this policy is a unique concern to the KIB because of the human dependence on this resource as documented in Section 5.7. This unique concern of this resource is discussed in the Resource Analysis in Section 5.6.3.4.

Policy E-1: Development Impacts to Subsistence

a. Development projects that would have significant adverse impacts to subsistence uses will not be allowed unless the KIB agrees that reasonable alternatives exist to harvest the subsistence resource affected by the project.

b. This policy is established for all areas designated as important to subsistence use under 11 AAC 112.250(g) and described in Section 4.5.6. It applies to all uses that may affect subsistence uses including the availability of subsistence resources.

Note: This policy was revised to disallow uses in response to DNR comments in the Preliminary Recommendation to the Commissioner. The KIB removed the policy from the final plan in response to comments in the Final Recommendation to the Commissioner.

Subject Use: Designated Subsistence Use Areas (11 AAC 114.250(g))

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250(g)). Specifically, the uses and activities identified in 11 AAC 114.250(g) are subsistence uses as defined in 11 AAC 114.990(51). This definition incorporates the definition in AS 16.05.940 which includes a wide range of activities including:

consumption for food, shelter, fuel, clothing, tools or transportation, for the making and selling of handicraft articles out of nonedible by-products of fish and wildlife resources taken for person or family consumption, and for customary trade . . .

Since 11 AAC 114.270(a)(1) does not limit the subject of an enforceable policy beyond the uses and activities identified in a listed subject use, a district policy may address any aspect of subsistence included in the definition of subsistence uses.

The policy is clear and concise regarding the requirements, the activities and the persons affected by it. Activities that have significant adverse impacts to subsistence uses may not occur unless the KIB agrees that subsistence users have other reasonable alternatives to harvest the resources. The

term “significant” is defined by the district. The policy uses precise, prescriptive and enforceable language.

Defined Area: This policy applies to a defined portion of the coastal zone. It applies to the two types of areas designated as important for subsistence use: 1) All marine waters within the coastal zone as important to subsistence, and 2) All non-federal onshore land and fresh water areas within the coastal zone as important to subsistence. These areas are described in Section 5.4.1 of Chapter 5. Appendix A indicates the boundaries of the coastal zone and federal land which is excluded from the designation.

Sensitivity to Development: Subsistence resources and uses are extremely sensitive to development. Changes to habitat, including noise, can reduce opportunities for subsistence use due to a reduction in the ability of habitat to support subsistence resources and uses. As well, project changes can reduce the attractiveness of an area for subsistence. The sensitivity to development is discussed in more detail in Chapter 5 in Section 5.4.3.3.

Not Adequately Addressed: A district enforceable policy on significant effects to subsistence use is necessary because no state or federal law prohibits uses and activities that would have a significant effect on subsistence uses. In addition, no state or federal law requires the agreement of the coastal district that other reasonable alternatives exist to harvest the resources that would be affected. This policy is more specific than state or federal law.

Most state and federal laws address allocation of subsistence resources. Rather than address allocation issues, the ACMP has traditionally addressed the effects of uses and activities on subsistence resources and uses. A discussion of the major subsistence laws follows.

The major federal law is the Alaska National Interest Lands Conservation Act (ANILCA). Title VIII of ANILCA addresses subsistence management on certain federal conservation units in Alaska. Regulations under ANILCA may be found at 36 CFR 242 and 50 CFR 100. ANILCA proves a subsistence priority to rural Alaska residents. It is important to note that although ANILCA applies to most federal conservation units, it does not apply to all federal.

A six member Federal Subsistence Board regulates federal subsistence management. This board determines which uses shall be regulated (i.e., they are customary and traditional uses), and it may close federal lands to non-subsistence uses. Ten regional advisory councils throughout Alaska provide recommendations to the board.

ANILCA gives a preference for subsistence uses over the taking of fish and wildlife for uses, and it imposes a priority whenever “it is necessary to restrict taking to assure the continued viability of a fish and wildlife population, or to continues such uses . . .” (Section 804).

Section 10 of ANILCA addresses land use decisions regarding subsistence. It requires the *evaluation* of the effect of “use, occupancy, or disposition on subsistence uses and need, the availability of other lands . . . and other alternatives . . .” The evaluation requires notice and a three-part finding that: 1) the restriction of subsistence use is necessary and consistent with sound management principles, 2) the activity will involve the minimal amount of public lands necessary, and 3) reasonable steps will be taken to minimize adverse impacts.

Section 11 of ANILCA requires that rural residents have reasonable access to subsistence resources on federal lands. Specifically, this section of the act references traditional access using “snowmobiles, motorboats, and other means of surface transportation . . .”

A major inadequacy of state law relates to a provision in Article VIII of the constitution which reserves wild fish and game for common use. Because of this constitutional limitation, the federal government took over subsistence management on its lands after a state law give a rural subsistence preference was found unconstitutional in 1989.

Alaska law address subsistence use and allocation of fish and game (AS 16.05.258), and terms used in this statute are defined at 16.05.940. This law requires the Board of Fisheries and the Board of Game to identify fish stocks and game populations that are customarily and traditionally taken for subsistence. These boards determine allocation of the subsistence resources which is outlined in Title 5 of the Alaska Administrative Code and is printed in booklet form each year. Allocation includes establishment of periods where fish and game may be taken for subsistence, the setting of bag limits, and establishment of allowable methods for subsistence harvest. About 80 local advisory committees provide recommendations the boards.

The statewide ACMP Subsistence standard is inadequate for a number of reasons. First, this standard only applies to areas designated as important for subsistence. If DNR does not approve proposed area designations under 11 AAC 114.250(g), the statewide standard will not apply to those areas. Second, the standard is inadequate and overly broad because it states that projects within designated areas must “avoid or minimize impacts to subsistence uses of coastal resources.” The definition of “avoid or minimize” in 11 AAC 112.990(34) is vague and inadequate. It states that “‘avoid or minimize’ means a process of avoiding adverse impacts to the maximum extent practicable and, if avoidance is not practicable, minimizing impacts where practicable.” This definition does not provide any specificity to the process for determining what impacts will be addressed or how they will be avoided or minimized. Because it is so general, it could be argued that any proposal to “minimize” an impact would fulfill the requirement for minimization. In addition, the qualifier “practicable,” as defined in 11 AAC 112.990(18), eliminates consideration of social, cultural or environmental factors, instead focusing on cost and logistics. Third, the standard is inadequate because it does not include a provision for mitigating adverse impacts. In some instances, mitigation will be required to address the level of impacts of a project on subsistence.

The State of Alaska’s Division of Subsistence is the research branch of the Alaska Department of Fish and Game. This division conducts studies on the customary and traditional use of subsistence resources. The division has no regulatory powers, however.

Unique Concern: Subsistence uses and resources are a unique concern to the KIB because many of its residents depend on subsistence to provide physical and spiritual nourishment. Many rural residents have little cash income, and subsistence keeps them from being impoverished. Additional information about unique concern may be found in Section 5.4.3.1 of Chapter 5.

Policy E-2: Subsistence Access

a. Access to traditional subsistence use areas on public lands and waters, or on private lands and waters where the landowner has granted formal permission for subsistence use activities, shall be accommodated unless reasonable alternative access is provided that is acceptable to the affected municipality or the village tribal organization. When determining reasonable alternative access, the coordinating agency shall consult with the KIB and affected cities and villages.

b. This policy is established for all areas designated as important to subsistence use under 11 AAC 112.250(g) and described in Section 4.5.6. It applies to all uses that may affect subsistence uses including the resources on which they depend.

Note: This policy was revised to disallow uses that affect subsistence access in response to DNR comments in the Preliminary Recommendation to the Commissioner. The KIB removed the policy from the final plan in response to comments in the Final Recommendation to the Commissioner.

Subject Use: Designated Subsistence Use Areas (11 AAC 114.250(g))

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250(g)). Specifically, the uses and activities identified in 11 AAC 114.250(g) are subsistence uses as defined in 11 AAC 114.990(51). This definition incorporates the definition in AS 16.05.940 which includes a wide range of activities including:

consumption for food, shelter, fuel, clothing, tools or transportation, for the making and selling of handicraft articles out of nonedible by-products of fish and wildlife resources taken for person or family consumption, and for customary trade . . .

Since 11 AAC 114.270(a)(1) does not limit the subject of an enforceable policy beyond the uses and activities identified in a listed subject use, in this case subsistence, a district policy may address subsistence access in a policy. Access is an important prerequisite to any subsistence activity described in AS 16.05.940.

The policy is clear and concise regarding the requirements, the activities and the persons affected by it. The specific activity addressed in the policy is any project activity that affects subsistence access to subsistence uses. The policy uses precise, prescriptive and enforceable language. The policy clarifies that affected villages or tribal organizations make the determination whether alternative access is acceptable.

Defined Area: This policy applies to a defined portion of the coastal zone. It applies to the two types of areas designated as important for subsistence use: 1) All marine waters within the coastal zone as important to subsistence, and 2) All non-federal onshore land and fresh water areas within the coastal zone as important to subsistence. These areas are described in Section 5.4.1 of Chapter 5. The maps in Appendix A indicate the boundaries of the coastal zone and federal land which is excluded from the designation.

Sensitivity to Development: Subsistence resources and uses are extremely sensitive to development. Changes to habitat, including noise, can reduce opportunities for subsistence use due to a reduction in the ability of habitat to support subsistence resources and uses. As well, project changes can reduce the attractiveness of an area for subsistence. The sensitivity to development is discussed in more detail in Chapter 5 in Section 5.4.3.3.

Not Adequately Addressed: The issues addressed in this policy are not adequately addressed by state or federal law. State laws, including the statewide ACMP subsistence standard, do not specifically address access to subsistence resources. Section 11 of ANILCA requires that reasonable traditional access be allowed over federal lands, but it does not provide the specificity of this policy, especially in regard to the effects of a project to access.

Most state and federal laws address allocation of subsistence resources. Rather than address allocation issues, the ACMP has traditionally addressed the effects of uses and activities on subsistence resources and uses. A discussion of the major subsistence laws follows.

The major federal law is the Alaska National Interest Lands Conservation Act (ANILCA). Title VIII of ANILCA addresses subsistence management on certain federal conservation units in Alaska. Regulations under ANILCA may be found at 36 CFR 242 and 50 CFR 100. ANILCA proves a subsistence priority to rural Alaska residents. It is important to note that although ANILCA applies to most federal conservation units, it does not apply to all federal.

A six member Federal Subsistence Board regulates federal subsistence management. This board determines which uses shall be regulated (i.e., they are customary and traditional uses), and it may close federal lands to non-subsistence uses. Ten regional advisory councils throughout Alaska provide recommendations to the board.

ANILCA gives a preference for subsistence uses over the taking of fish and wildlife for uses, and it imposes a priority whenever “it is necessary to restrict taking to assure the continued viability of a fish and wildlife population, or to continues such uses . . .” (Section 804).

Section 10 of ANILCA addresses land use decisions regarding subsistence. It requires the *evaluation* of the effect of “use, occupancy, or disposition on subsistence uses and need, the availability of other lands . . . and other alternatives . . .” The evaluation requires notice and a three-part finding that: 1) the restriction of subsistence use is necessary and consistent with sound management principles, 2) the activity will involve the minimal amount of public lands necessary, and 3) reasonable steps will be taken to minimize adverse impacts.

Section 11 of ANILCA requires that rural residents have reasonable access to subsistence resources on federal lands. Specifically, this section of the act references traditional access using “snowmobiles, motorboats, and other means of surface transportation . . .”

A major inadequacy of state law relates to a provision in Article VIII of the constitution which reserves wild fish and game for common use. Because of this constitutional limitation, the federal government took over subsistence management on its lands after a state law give a rural subsistence preference was found unconstitutional in 1989.

Alaska law address subsistence use and allocation of fish and game (AS 16.05.258), and terms used in this statute are defined at 16.05.940. This law requires the Board of Fisheries and the Board of Game to identify fish stocks and game populations that are customarily and traditionally taken for subsistence. These boards determine allocation of the subsistence resources which is outlined in Title 5 of the Alaska Administrative Code and is printed in booklet form each year. Allocation includes establishment of periods where fish and game may be taken for subsistence, the setting of bag limits, and establishment of allowable methods for subsistence harvest. About 80 local advisory committees provide recommendations the boards.

The statewide ACMP Subsistence standard is inadequate for a number of reasons. First, this standard only applies to areas designated as important for subsistence. If DNR does not approve proposed area designations under 11 AAC 114.250(g), the statewide standard will not apply to those areas. Second, the standard is inadequate and overly broad because it states that projects within designated areas must “avoid or minimize impacts to subsistence uses of coastal resources.” The definition of “avoid or minimize” in 11 AAC 112.990(34) is vague and inadequate. It states that “‘avoid or minimize’ means a process of avoiding adverse impacts to the

maximum extent practicable and, if avoidance is not practicable, minimizing impacts where practicable.” This definition does not provide any specificity to the process for determining what impacts will be addressed or how they will be avoided or minimized. Because it is so general, it could be argued that any proposal to “minimize” an impact would fulfill the requirement for minimization. In addition, the qualifier “practicable,” as defined in 11 AAC 112.990(18), eliminates consideration of social, cultural or environmental factors, instead focusing on cost and logistics. Third, the standard is inadequate because it does not include a provision for mitigating adverse impacts. In some instances, mitigation will be required to address the level of impacts of a project on subsistence.

The State of Alaska’s Division of Subsistence is the research branch of the Alaska Department of Fish and Game. This division conducts studies on the customary and traditional use of subsistence resources. The division has no regulatory powers, however.

Unique Concern: Subsistence uses and resources are a unique concern to the KIB because many of its residents depend on subsistence to provide physical and spiritual nourishment. Many rural residents have little cash income, and subsistence keeps them from being impoverished. Additional information about unique concern may be found in Section 5.4.3.1 of Chapter 5.

Policy E-3: Customary and Traditional Need

a. Projects shall not be allowed if they would reduce the level of subsistence use below the customary and traditional harvest of a community as documented in state or federal regulations or in subsistence use studies cited in the resource inventory and analysis. This policy applies to uses and activities in areas designated as important to subsistence use under 11 AAC 112.250(g) and described in Section 4.5.6.

b. This policy is established for all areas designated as important to subsistence use under 11 AAC 112.250(g) and described in Section 4.5.6. It applies to all uses that may affect subsistence uses including the resources on which they depend.

Note: This policy was revised to disallow uses in response to DNR comments in the Preliminary Recommendation to the Commissioner. The KIB removed the policy from the final plan in response to comments in the Final Recommendation to the Commissioner.

Subject Use: Designated Subsistence Use Areas (11 AAC 114.250(g))

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250(g)). Specifically, the uses and activities identified in 11 AAC 114.250(g) are subsistence uses as defined in 11 AAC 114.990(51). This definition incorporates the definition in AS 16.05.940 which includes a wide range of activities including:

consumption for food, shelter, fuel, clothing, tools or transportation, for the making and selling of handicraft articles out of nonedible by-products of fish and wildlife resources taken for person or family consumption, and for customary trade . . .

Since 11 AAC 114.270(a)(1) does not limit the subject of an enforceable policy beyond the uses and activities identified in a listed subject use, a district policy may address any aspect of subsistence related to the definition of subsistence uses.

The policy is clear and concise regarding the requirements, the activities and the persons affected by it. The specific activities addressed in the policy are any project activities that would reduce the subsistence use below a community's customary and traditional harvests. The policy uses precise, prescriptive and enforceable language. Customary and traditional use is documented in the studies identified in the resource inventory and analysis, and it is also documented by the Alaska Department of Fish and Game and the federal Subsistence Board. The policy is enforceable because a project that would reduce subsistence use below the customary and traditional use would not be allowed.

Defined Area: This policy applies to a defined portion of the coastal zone. It applies to the two types of areas designated as important for subsistence use: 1) All marine waters within the coastal zone as important to subsistence, and 2) All non-federal onshore land and fresh water areas within the coastal zone as important to subsistence. These areas are described in Section 5.4.1 of Chapter 5. The maps in Appendix A indicate the boundaries of the coastal zone and federal land which is excluded from the designation.

Sensitivity to Development: Subsistence resources and uses are extremely sensitive to development. Changes to habitat, including noise, can reduce opportunities for subsistence use due to a reduction in the ability of habitat to support subsistence resources and uses. As well, project changes can reduce the attractiveness of an area for subsistence. The sensitivity to development is discussed in more detail in Chapter 5 in Section 5.4.3.3.

Not Adequately Addressed: No state or federal laws specifically disallow a use that would result in a reduction of subsistence uses below a community's level of need. This policy is necessary to ensure that customary and traditional uses of a community continue. This policy is more specific than state or federal law.

Most state and federal laws address allocation of subsistence resources. Rather than address allocation issues, the ACMP has traditionally addressed the effects of uses and activities on subsistence resources and uses. A discussion of the major subsistence laws follows.

The major federal law is the Alaska National Interest Lands Conservation Act (ANILCA). Title VIII of ANILCA addresses subsistence management on certain federal conservation units in Alaska. Regulations under ANILCA may be found at 36 CFR 242 and 50 CFR 100. ANILCA proves a subsistence priority to rural Alaska residents. It is important to note that although ANILCA applies to most federal conservation units, it does not apply to all federal.

A six member Federal Subsistence Board regulates federal subsistence management. This board determines which uses shall be regulated (i.e., they are customary and traditional uses), and it may close federal lands to non-subsistence uses. Ten regional advisory councils throughout Alaska provide recommendations to the board.

ANILCA gives a preference for subsistence uses over the taking of fish and wildlife for uses, and it imposes a priority whenever "it is necessary to restrict taking to assure the continued viability of a fish and wildlife population, or to continues such uses . . ." (Section 804).

Section 10 of ANILCA addresses land use decisions regarding subsistence. It requires the *evaluation* of the effect of “use, occupancy, or disposition on subsistence uses and need, the availability of other lands . . . and other alternatives . . .” The evaluation requires notice and a three-part finding that: 1) the restriction of subsistence use is necessary and consistent with sound management principles, 2) the activity will involve the minimal amount of public lands necessary, and 3) reasonable steps will be taken to minimize adverse impacts.

Section 11 of ANILCA requires that rural residents have reasonable access to subsistence resources on federal lands. Specifically, this section of the act references traditional access using “snowmobiles, motorboats, and other means of surface transportation . . .”

A major inadequacy of state law relates to a provision in Article VIII of the constitution which reserves wild fish and game for common use. Because of this constitutional limitation, the federal government took over subsistence management on its lands after a state law give a rural subsistence preference was found unconstitutional in 1989.

Alaska law address subsistence use and allocation of fish and game (AS 16.05.258), and terms used in this statute are defined at 16.05.940. This law requires the Board of Fisheries and the Board of Game to identify fish stocks and game populations that are customarily and traditionally taken for subsistence. These boards determine allocation of the subsistence resources which is outlined in Title 5 of the Alaska Administrative Code and is printed in booklet form each year. Allocation includes establishment of periods where fish and game may be taken for subsistence, the setting of bag limits, and establishment of allowable methods for subsistence harvest. About 80 local advisory committees provide recommendations the boards.

The statewide ACMP Subsistence standard is inadequate for a number of reasons. First, this standard only applies to areas designated as important for subsistence. If DNR does not approve proposed area designations under 11 AAC 114.250(g), the statewide standard will not apply to those areas. Second, the standard is inadequate and overly broad because it states that projects within designated areas must “avoid or minimize impacts to subsistence uses of coastal resources.” The definition of “avoid or minimize” in 11 AAC 112.990(34) is vague and inadequate. It states that “‘avoid or minimize’ means a process of avoiding adverse impacts to the maximum extent practicable and, if avoidance is not practicable, minimizing impacts where practicable.” This definition does not provide any specificity to the process for determining what impacts will be addressed or how they will be avoided or minimized. Because it is so general, it could be argued that any proposal to “minimize” an impact would fulfill the requirement for minimization. In addition, the qualifier “practicable,” as defined in 11 AAC 112.990(18), eliminates consideration of social, cultural or environmental factors, instead focusing on cost and logistics. Third, the standard is inadequate because it does not include a provision for mitigating adverse impacts. In some instances, mitigation will be required to address the level of impacts of a project on subsistence.

The State of Alaska’s Division of Subsistence is the research branch of the Alaska Department of Fish and Game. This division conducts studies on the customary and traditional use of subsistence resources. The division has no regulatory powers, however.

Unique Concern: Subsistence uses and resources are a unique concern to the KIB because many of its residents depend on subsistence to provide physical and spiritual nourishment. Many rural residents have little cash income, and subsistence keeps them from being impoverished. Additional information about unique concern may be found in Section 5.4.3.1 of Chapter 5.

Policy F-1: Stream Crossings

a. Bridges and culverts shall be designed, constructed and maintained to prevent significant adverse impacts to streams and to allow free passage of fish up and downstream.

b. Culverts shall be designed and constructed to transport high flow bedload.

c. This policy is established for the Transportation Routes and Facilities standard subject use (11 AAC 112.280). It applies to all use and activities related to transportation routes and facilities.

Note: This policy was revised to disallow uses in response to DNR comments in the Preliminary Recommendation to the Commissioner. The KIB removed the policy from the final plan in response to comments in the Final Recommendation to the Commissioner.

Subject Use: 11 AAC 112.280

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). The policy is clear and concise regarding the requirements, the activities and the persons affected by it. The policy describes the conditions an applicant must meet to minimize significant adverse impacts resulting from the design, construction and maintenance of bridges and culverts along streams, including the free passage of fish up and downstream.

Defined Area: This policy applies to a defined portion of the coastal zone because it applies to transportation routes and facilities throughout the district.

Sensitivity to Development: Anadromous fish streams in the KIB are sensitive to development because of their importance to fish at critical life stages, and because of the importance of healthy anadromous fish stocks to coastal district residents. Freshwater bodies transport nutrients, chemicals needed for photosynthesis, and fresh water to marine water bodies. Anadromous fish bring nutrients back to freshwater systems. As documented in Section 5.6.3.3, activities that affect any of these resources can have a far-reaching effect.

Soil, sediment, rock, dead vegetation and other materials that may be deposited into streams during culvert and bridge placement can result in physical destruction of stream habitat and the organisms that depend upon the habitat. Fish passage may be directly impeded by such deposits. Stream gradients may also be affected by depositions of materials and debris into streams. The effects of increased turbidity may include temperature changes, oxygen content, and a reduction in light, all of which may reduce the stream's ability to sustain fish. Alterations to stream channels may reduce desirable habitat, changes in the distribution of streambed materials, and enhance the changes previously detailed. Inadequate or improperly installed culverts and other drainage structures can impede movements of fish, especially juvenile fish. Accumulation of debris at a bridge site may impede fish passage. Section 5.6.3.4.

Not Adequately Addressed: State and federal statutes and regulations do not adequately address the conditions an applicant must meet to minimize significant adverse impacts resulting from the design, construction and maintenance of bridges and culverts along streams, including the free passage of fish up and downstream. While some effects may be addressed by DEC authorities under AS 46.03 or by federal permitting under 33 CFR 323 and 33 CFR 325 during the

permitting process for a project, others may be addressed only on a discretionary and unpredictable basis or not at all.

AS 46.03.010(a) states that it is the policy of the state to conserve, improve, and protect its natural resources and environment and control water, land, and air pollution, in order to enhance the health, safety, and welfare of the people of the state and their overall economic and social well-being. Section (b) states that it is the policy of the state to improve and coordinate the environmental plans, functions, powers, and programs of the state in cooperation with government and non-government agencies and individuals, and to develop and manage the basic resources of water, land, and air so the state may fulfill its responsibility as trustee of the environment for the present and future generations.

Along with DEC statutes and regulations governing oil and hazardous substance pollution control (AS 46.04), hazardous substance release control (AS 46.09), and air quality control (AS 46.14) and the regulations adopted under AS 46.03 constitute the exclusive enforceable policies of the Alaska coastal management program for those purposes.

AS 46.03.020(10) lists the powers of the department relevant to this policy of the KIB: The department may adopt regulations necessary to effectuate the purposes of this chapter, including, by way of example and not limitation, regulations providing for

- A. Control, prevention, and abatement of air, water, or land or subsurface land pollution;
- B. Safeguard standards for petroleum and natural gas pipeline construction, operation, modification, or alteration;
- C. Protection of public water supplies by establishing minimum drinking water standards, and standards for the construction, improvement, and maintenance of public water supply systems;
- D. Collection and disposal of sewage and industrial wastes;
- E. Collection and disposal of garbage, refuse, and other discarded solid materials from industrial, commercial, agricultural, and community activities or operations;
- F. Control of pesticides;
- G. Other purposes as may be required for the implementation of the policy declared in AS 46.03.010;
- H. Handling, transportation, treatment, storage, and disposal of hazardous wastes.

Regulations of the department that have been adopted to carry out the purpose of AS 46.03 and under which the issuance of permits, certifications, approvals, and authorizations by the DEC establishes consistency with the ACMP for activities of a proposed project subject to those permits, certifications, approvals, and authorizations with regard to the subject of this KIB policy include: 18 AAC 70.015 (antidegradation policy), 18 AAC 70.020 (protected water use classes and subclasses; water quality criteria; water quality standards table), 18 AAC 70.040 (procedure for applying water quality criteria), and 18 AAC 70.235 (site-specific criteria).

While AS 46.03 and regulations adopted under that chapter establish consistency with the ACMP for water quality necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, there are effects from bridge and culvert design, siting and construction that are extraneous to the DEC authority as defined in AS 46.40.040(11). Such effects may be addressed by a district enforceable policy.

Federal authorities governing discharges of dredged or fill material into the waters of the United States (33 CFR Part 323 and 33 CFR Part 325) require permits for work that includes such

discharges. The Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material names significantly adverse effects of such discharges and states that these will not be permitted “unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem.” The permitting agency has discretion to determine whether applicant-proposed measures to reduce impacts are appropriate and practicable on a case-specific basis.

AS 16.10.010 requires that a person apply for and obtain a permit from the DEC before (1) obstructing, diverting or polluting waters of the state, either fresh or salt, utilized by salmon in the propagation of the species by placing any of the listed pollutants or debris (including dredged or fill materials) into those waters; (2) erecting a dam, barricade, or obstruction to retard...divert the waters that would affect the free ingress or egress of salmon into those waters,; or (3) render the waters described in section (1) as inaccessible or uninhabitable for salmon spawning or propagation.

This regulation requires permitting by DEC for dredging or filling in waters used by salmon for propagation; it does not describe specific measures for minimization of the adverse impacts listed within the regulation, thus lacking the specificity of this KIB policy. This regulation also applies only to salmon and not to other anadromous fish.

The Office of Habitat Management and Permitting administers AS 41.14.840 (Fishway Act) and AS 41.14.870 (Anadromous Fish Act).

Regarding obstructions to fish streams, AS 41.14.840 is inadequate because it only applies when “the deputy commissioner considers it necessary.” Rather than requiring anything, this statute only allows the Alaska Department of Natural Resources to require a fishway and a device for passage of downstream migrating fish. Because implementation of this statute is completely discretionary, it is inadequate.

AS 41.14.870 has four subsections. Subsection (a) requires specification of rivers, lakes and streams that are important for the spawning, rearing or migration of anadromous fish. The Fish Distribution Database created by the Alaska Department of Fish and Game is part of the coastal management plan in Appendix __. Subsection (b) requires notification to the deputy commissioner for projects that “construct a hydraulic project, or use, divert, obstruct, pollute, or change the natural flow or bed of a specified river, lake, or stream, or use wheeled, tracked, or excavating equipment or log-dragging equipment in the bed of a specified river, lake, or stream . . .” Subsection (c) provides the deputy commissioner the discretion to require information about the project, including full plans and specifications. Subsection (d) gives the deputy commissioner the discretion to find “the plans and specifications insufficient for the proper protection of fish and game. This statute is insufficient because subsections (c) and (d) are discretionary and because it does not provide specificity about what entail “proper protection of fish and game.”

Unique Concern: Healthy streams are necessary to produce healthy runs of salmon and other anadromous fish. Kodiak area fisheries include some stocks of concern, which are the subject or run rebuilding efforts. As the state’s largest fishing port, KIB has a larger stake in Alaska’s fisheries than any other census area in the state, as documented in Section 5.7.2. Healthy fish habitat in both marine and fresh water environments is critical to Kodiak’s commercial fishing and seafood processing industries, which play an essential role in the local economy as well as contributing to the identity of the communities.

Policy F-2: Maintaining Traditional Public Access

a. Restrictions on traditional methods and means of public access across municipal, state and federal land shall be minimized. Elements of public access include roads, waterways, trails, and marine anchorages. Prior to disposal of public lands, public access routes shall be identified and easements reserved.

b. This policy is established for the Transportation Routes and Facilities standard subject use (11 AAC 112.280). It applies to access using transportation routes.

Note: This policy was removed from the plan in response to DNR comments in the Preliminary Recommendation to the Commissioner.

Subject use: Transportation routes and facilities. 11 AAC 112.280.

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). The policy is clear and concise regarding the requirements, the activities and the persons affected by it. The policy describes the conditions an applicant must meet to minimize significant adverse impacts to traditional public access.

Defined Area: This policy applies to a defined portion of the coastal zone because it applies to transportation routes and facilities throughout the district.

Sensitivity to Development: While the road system around Kodiak is extensive by comparison to most Southwestern Alaska communities, there is no current plan to develop a road around Kodiak Island. KIB residents have traditionally used a variety of methods and means of public access to areas for hunting, fishing, subsistence, recreation, and tourism. Private ownership of remote parcels of land has increased in the past 20 years. (Section 5.16) Management of methods and means of traditional access to minimize restrictions is necessary to avoid conflicts among user groups within the borough.

Not Adequately Addressed: Alaska statutes and regulations do address public access to state and some private lands. However, DNR, its commissioner, or a director, is given discretion in most instances to condition, limit, or deny public access under some circumstances. This district policy applies to access across municipal, state, and federal land and requires that restrictions to such traditional access be minimized. Thus it applies to land not included in the state statutes and requires minimization of restrictions, without assorted discretionary obstructions to free passage.

AS 38.04.050 addresses access to private use areas and requires that when state land is surveyed for purposes of private use, legal rights-of-way and easements shall be reserved for access. It applies only under the condition that a survey of state land is being conducted, and it addresses only legally established rights-of-way and easements. Traditional access includes access across land that may not require formal rights-of-way or public easements. Under AS 38.04.055, when state land is made available for private use, easements and rights-of-way are required as necessary to reach or use public water and public and private land, including trails that have an established history of use for commerce, recreation, transportation, or providing access to a traditional outdoor activity. However, the commissioner of DNR may restrict the use of an easement or right-of-way reserved under AS 38.04.050 or 055 or another law in order to protect public safety or property. While a grantee, lessee, or interest holder of state land must agree in

writing to such restrictions, there is no provision for agreement by the public users in the KIB to such restrictions. And, although the statute requires that restrictions be narrowly tailored to achieve the protection of public safety or property, the restrictions under this statute may not minimize restrictions on traditional methods and means of public access across municipal, state and federal land.

AS 38.05.070 requires that when leasing state land, including tide, submerged or shoreland, the director shall preserve reasonable and traditional access to state land and water, but does not require minimization of restrictions to traditional methods and means of public access across municipal, state and federal land.

Under AS 38.05.127, prior to disposal of any interest in state land adjacent to a navigable water or public water, the commissioner must provide for the specific easements or rights-of-way necessary to ensure free access to and along the body of water. However, the commissioner has the discretion to regulate or limit access if he or she deems it necessary for other beneficial uses or public purposes. Again, this requirement falls short of minimizing restrictions on traditional methods and means of public access across municipal, state and federal land.

AS 38.05.128 allows for obstructions or interference with the free passage or use by a person of any navigable water under a wide variety of circumstances, including when: authorized by a federal and a state agency, authorized under a federal or state law or permit, exempt under the Clean Water Act, caused by normal operation of freight barging that is otherwise consistent with law, or authorized by the commissioner after reasonable public notice. There is no requirement under this statute to minimize restrictions on the traditional methods and means of public access across municipal, state and federal land.

11 AAC 51.045 allows an access easement to be considered unnecessary for access to and along water if justified in writing by DNR.

11 AAC 112.280 is the statewide standard for transportation routes and facilities. Subsection (3) states that transportation routes or facilities must avoid, minimize, or mitigate “blockage” of existing or traditional access. This standard inadequately addresses traditional methods and means of public access across municipal, state and federal land because it does not address methods and means of access. Also, by addressing “blockage” of access, it fails to address minimizing restrictions that may unnecessarily hamper traditional methods and means of access without actually blocking access.

Unique Concern: Transportation resources are a unique concern to the KIB and its residents because they depend on transportation and access to support economic activity, including subsistence, recreation, tourism, sport and commercial fishing, and other activities necessary for social, cultural and economic well being.

Policy F-3 Siting and Scheduling

a. Transportation corridors shall be sited, designed and operated to:

- 1. Prevent, where practicable, significant adverse impacts to habitats, biological resources, coastal resource uses, recreation, socioeconomic resources, and traditional subsistence uses,*
- 2. Be consolidated with other transportation or utility corridors, and*

3. *Minimize crossings of anadromous fish streams and consolidate them to reduce impacts to an individual drainage.*

b. Utility corridors and facilities shall be sited, designed and operated to:

1. *Prevent, where practicable, significant adverse impacts to habitats, biological resources, coastal resource uses, recreation, socioeconomic resources, and traditional subsistence uses,*
2. *Be consolidated with transportation corridors and facilities, and*
3. *Minimize crossings of anadromous fish streams and consolidated them to reduce impacts to an individual drainage.*

b. Subsection a is established for the Transportation Routes and Facilities standard subject use (11 AAC 112.280), and subsection b is established for the Utility Routes and Facilities (11 AAC 112.240). This policy applies all uses related to siting of transportation routes and facilities and utility routes and facilities.

Note: This policy was revised to disallow uses in response to DNR comments in the Preliminary Recommendation to the Commissioner. The KIB removed the policy from the final plan in response to comments in the Final Recommendation to the Commissioner.

Subject Use: Transportation routes and facilities (11 AAC 112.280)
Utility routes and facilities (11 AAC 112.240)

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). The policy is clear and concise regarding the requirements, the activities and the persons affected by it. The policy describes the conditions an applicant must meet to minimize significant adverse impacts to traditional public access.

Defined Area: This policy applies to a defined portion of the coastal zone because it applies to transportation routes and facilities throughout the district.

Sensitivity to Development: The sensitivity to development of the coastal uses and resources that are called out in this district enforceable policy is well documented throughout the resource inventory and resource analysis, and in the justifications of the individual policies in this appendix.

Transportation corridors and utility corridors and facilities have the potential to disturb, disrupt, or destroy habitats, including the integrity of habitats and their functions, and including migration routes, biological resources, coastal resource uses, recreational opportunities and areas, socioeconomic resources, and traditional subsistence uses and resources.

Anadromous fish streams in the KIB are sensitive to development because of their importance to fish at critical life stages, and because of the importance of healthy anadromous fish stocks to coastal district residents. Freshwater bodies transport nutrients, chemicals needed for photosynthesis, and fresh water to marine water bodies. Anadromous fish bring nutrients back to

freshwater systems. As documented in Section 5.6.3.3, activities that affect any of these resources can have a far-reaching effect.

Soil, sediment, rock, dead vegetation and other materials that may be deposited into streams during road construction and associated work can result in physical destruction of stream habitat and the organisms that depend upon the habitat. Fish passage may be directly impeded by such deposits. Stream gradients may also be affected by depositions of materials and debris into streams. The effects of increased turbidity may include temperature changes, oxygen content, and a reduction in light, all of which may reduce the stream's ability to sustain fish. Alterations to stream channels may reduce desirable habitat, changes in the distribution of streambed materials, and enhance the changes previously detailed. Inadequate or improperly installed culverts and other drainage structures can impede movements of fish, especially juvenile fish. Accumulation of debris at a bridge site may impede fish passage. Section 5.6.3.4.

Not Adequately Addressed: The siting, design and operation for transportation corridors and utility corridors and facilities with regard to the factors included in this district policy are not adequately addressed by state or federal statutes and regulations. While many of these factors are taken into account in the planning and construction of such corridors and facilities, there is no existing state or federal requirement to do so.

Unique Concern: Transportation resources are a unique concern to the KIB and its residents because they depend on transportation and access to support economic activity, including subsistence, recreation, tourism, sport and commercial fishing, and other activities necessary for social, cultural and economic well being. The enforceable policies of the district pertaining to the coastal uses and resources described in this policy, and which were developed in a public process in the district, are evidence of the unique concern that these coastal resources and uses embody for district residents. Planning for siting, design and operation of transportation and utilities to protect these uses and resources is consistent with the district's unique concerns.

Policy G-1: Development Affecting Commercial Fishing and Seafood Processing

a. Applicants shall incorporate designs and measures to eliminate significant adverse impacts to fisheries resources and commercial fishing and seafood processing activities into project descriptions.

b. This policy applies to all uses and activities that affect commercial fishing and seafood processing activities in areas designated as suitable for commercial fishing and seafood processing facilities under 11 AAC 114.250(f) as described in Section 4.5.5.

Note: In response to comments in the Preliminary Recommendation to the Commissioner, this policy was revised to clarify it only applied to areas designated as suitable for commercial fishing and seafood processing. The KIB removed the policy from the final plan in response to comments in the Final Recommendation to the Commissioner.

Subject Use: Areas suitable for commercial fishing and seafood processing facilities (11 AAC 112.250(f))

Criteria: This policy meets the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250(f)). The uses and activities include anything that could affect commercial fishing and seafood processing facilities. The justification for areas suitable for commercial fishing and seafood processing facilities are provided earlier in this Appendix.

The policy is clear and concise regarding the requirements, the activities and the persons affected by it. The requirements of the policy can be met by ensuring that measures are included in the project description to eliminate significant adverse impacts to commercial fishing and seafood processing activities. This requirement may be met by inclusion of the measures in the project description submitted by the applicant in the project description or in the final project description amended by the applicant to incorporate alternative measures identified in the proposed consistency determination. The policy uses precise, prescriptive and enforceable language.

Defined Area: The policy applies to a defined geographic area identified in the description of areas designated as suitable for commercial fishing and seafood processing facilities as described in Section 4.5.5 (Chapter 4), Section 5.7.1 (Chapter 5) and in the description of these area designations in the justification at the beginning of this Appendix.

Sensitivity to Development: Commercial fishing and seafood processing is sensitive to development because other activities can displace these facilities. There are limited areas to conduct commercial fishing and seafood processing operations. In addition, commercial fishing and seafood processing are sensitive to development because marketing efforts can be compromised if there is a perception that the seafood is tainted. Sensitivity to development is discussed further in Section 5.7.3.2.

Not Adequately Addressed: Seafood processing and commercial fishing are not adequately addressed in state or federal law because there are no requirements for applicants to specify measures in project descriptions that would eliminate significant adverse impacts.

State and federal laws reviewed include 11 AAC 110.205, 11 AAC 110.215, 11 AAC 110.260, 11 AAC 110.310, 11 AAC 110.410, and 15 CFR 930.58.

Unique Concern: Commercial fishing and seafood processing are a unique concern to the district because it depends on these activities for its economy. The importance of these resources to the KIB is described in Section 5.7.3.1 and Section 5.7.2.

Policy G-2: Commercial Fishing

a. Applicants shall include provisions in the project description for consultation with commercial fishermen regarding scheduling of activities within coastal waters that conflict with commercial fishing operations.

b. At a minimum, the provisions in subsection a of this policy shall include timely written notification to Kodiak fishery organizations to apprise commercial fishing interests of the schedule and location of development activities prior to initiation of the activities. The notice shall include a schedule of activities and a map or description of any potential conflicts with or physical obstructions which may impact or preclude commercial fishing opportunities or damage or contaminate

fishing gear. Such activities include, but are not limited to, subsea pipelines, subsea wellhead structures, seismic survey operations, and modifications to the natural shoreline topography or sea-bottom profile.

c. This policy applies to all uses and activities that affect commercial fishing in areas designated as suitable for commercial fishing and seafood processing facilities under 11 AAC 114.250(f) as described in Section 4.5.5.

Note: In response to comments in the Final Recommendation to the Commissioner, the KIB removed the policy from the final plan.

Subject Use: Areas suitable for commercial fishing and seafood processing facilities (11 AAC 112.250(f))

Criteria: This policy meets the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250(f)). The uses and activities include anything that could conflict with commercial fishing activities in coastal waters. The justification for areas suitable for commercial fishing and seafood processing facilities are provided earlier in this Appendix.

The policy is clear and concise regarding the requirements, the activities and the persons affected by it. The policy uses precise, prescriptive and enforceable language. The requirements of the policy can be met by including a consultation and notification provision in the project description. A sample of activities is provided to provide a clear idea of the types of operations that could conflict with commercial fishing activities.

Defined Area: The policy applies to a defined geographic area identified in the description of areas designated as suitable for commercial fishing and seafood processing facilities as described in Section 4.5.5 (Chapter 4), Section 5.7.1 (Chapter 5) and in the description of these area designations in the justification at the beginning of this Appendix.

Sensitivity to Development: Commercial fishing and seafood processing is sensitive to development because other activities can displace these facilities. There are limited areas to conduct commercial fishing and seafood processing operations. In addition, commercial fishing and seafood processing are sensitive to development because marketing efforts can be compromised if there is a perception that the seafood is tainted. Sensitivity to development is discussed further in Section 5.7.3.2.

Not Adequately Addressed: Seafood processing and commercial fishing are not adequately addressed in state or federal law because there are no requirements for applicants to specify consultation and notification measures in project descriptions.

State and federal laws reviewed include 11 AAC 110.205, 11 AAC 110.215, 11 AAC 110.260, 11 AAC 110.310, 11 AAC 110.410, and 15 CFR 930.58.

Unique Concern: Commercial fishing and seafood processing are a unique concern to the district because it depends on these activities for its economy. The importance of these resources to the KIB is described in Section 5.7.3.1 and Section 5.7.2.

Policy G-3 Siting of Seafood Processing Facilities

a. Land-based and floating fish processors shall site their operations to ensure that there will be no significant adverse impacts to commercial fishing and the resources on which they depend. The construction of new facilities or the modification of existing seafood processing facilities shall not be located in areas:

- 1. Which do not have circulation characteristics or biological assimilation capacity to eliminate significant adverse impacts to marine habitat productivity, or*
- 2. Which create an “attractive nuisance” in a manner that creates a threat to fish and wildlife?*

b. This policy applies to areas designated as suitable for commercial fishing and seafood processing facilities under 11 AAC 114.250(f) as described in Section 4.5.5.

Note: In response to comments in the Final Recommendation to the Commissioner, the KIB removed this policy from the final plan.

Subject Use: Commercial fishing and seafood processing facilities. 11 AAC 114.250(f)

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). The policy is clear and concise regarding the requirements, the activities and the persons affected by it. The policy describes the conditions an applicant must meet to minimize significant adverse impacts to areas suitable for commercial fishing and seafood processing facilities.

Defined Area: This policy applies to a defined portion of the coastal zone because it applies to the coastal area important for fisheries and seafood processing.

Sensitivity to Development: marine waters identified in section 5.6 as sensitive habitats are also sensitive for commercial fishing because a healthy supply of fish is essential to the continued existence of commercial fisheries. Discharges of seafood processing wastes can result in harmful algal blooms, “dead zones,” introduction of pathogens or harmful chemicals such as cleaning agents into marine waters, attraction of wildlife, and other related problems that may affect sensitive fish habitat and the ability to harvest healthy wild fish. Siting and construction considerations, including the use of appropriate technologies can ameliorate harmful impacts.

Not Adequately Addressed: State and federal statutes and regulations do not adequately address siting of land-based and floating fish processors to avoid significant adverse impacts to other coastal uses and resources. Neither do existing statutes and regulations address siting or construction considerations for new seafood processing facilities or in the modification of existing facilities to avoid harmful discharges into sensitive marine waters.

18 AAC 70.015(a) requires that existing water uses and the level of water quality necessary to protect existing uses must be maintained and protected. Subsection (a)(2) allows the DEC, in its discretion, to allow lower water quality for a short-term variance, a zone of deposit, a mixing

zone, or another purpose if an applicant submits evidence in support of the application and the department finds that the reduction in water quality (A) is necessary to accommodate important economic or social development, (B) will not violate specific water quality standards, (C) results in water quality adequate to fully protect existing uses of the water, (D) is determined by the department to be adequate as to the methods of pollution prevention, control, and treatment being the most effective and reasonable and applied to all wastes and substances to be discharged, and (E) is under a regime of treatment and control of point and nonpoint sources that meet specified standards.

18 AAC 70.020 enumerates the protected water uses classes and subclasses in the state and establishes the water quality criteria and standards for fresh and marine waters. For marine water, aquaculture, seafood processing, growth and propagation of fish, shellfish, other aquatic life, and wildlife, and harvesting for consumption of raw mollusks or other raw aquatic life. Section (b) sets out the water quality standards that regulate human activities that result in alterations to waters within the state's jurisdiction.

Federally promulgated water quality standards for the State of Alaska, including aquatic life criteria, are contained in 40 CFR 131.36, "Toxics criteria for those states not complying with Clean Water Act section 303©(2)(B)." While the federal regulations address growth and propagation of fish, shellfish, other aquatic life, and wildlife, the criteria are applied to water quality and do not address siting or construction considerations to avoid harmful impacts to fish habitat from seafood processing facilities.

Unique Concern: As the state's largest fishing port, KIB has a larger stake in Alaska's fisheries than any other census area in the state, as documented in Section 5.7.2. Healthy fish habitat in both marine and fresh water environments is critical to Kodiak's commercial fishing and seafood processing industries, which play an essential role in the local economy as well as contributing to the identity of the communities.

Policy H-1: Protection of Recreation Values

a. On public lands and waters used for recreation activities or on private lands and waters where the landowner has granted formal permission for recreational activities, non-recreational projects and activities shall be located, designed, constructed and operated to avoid significant adverse impacts to recreation resources and activities , including access and scenic views unless a comparable alternative recreational opportunity can be provided that would not decrease the quality of the recreation experience in another area.

b. Access through waterbodies shall be maintained.

- 1. Fences shall not be constructed across streams,*
- 2. Bridges must be constructed at least four feet above the ordinary high water mark,*
- 3. Structures, other than weirs, shall not impede travel by watercraft along waterways, and*
- 4. Weirs shall be constructed to allow for small boat passage, and warning signs shall be placed at least 25 yards upstream of the weirs.*

c. This policy applies to areas designated for recreation under 11 AAC 114.250(c) as described in Section 4.5.1, and it applies to all uses and activities that could affect recreational values described in the resource inventory and analysis

Note: After issuance of the Preliminary Recommendation to the Commissioner, a new subsection d was added to require monitoring measures be added to the project description, and a new subsection c was added to require impacts avoid, minimize or mitigate impacts to recreation. In response to comments in the Final Recommendation to the Commissioner, the KIB revised this policy. Language was added to subsections a and b. Subsection c was reworded and moved to a new Policy H-4. Subsection d was removed.

Subject Use: Designated recreation areas under 11 AAC 114.250(c).

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250(c)). Specifically, the uses and activities relate to those associated with designated areas that receive significant recreational use or have the potential for such use because of physical, biological or cultural features. The justification for the designated recreation areas is provided earlier in this appendix.

The policy is clear and concise regarding the requirements, the activities and the persons affected by it. The policy uses precise, prescriptive and enforceable language. The requirements of the policy can be met by demonstrating that significant adverse impacts to recreation have been avoided or minimized. The policy allows for such activities if an alternative recreational experience can be provided that does not decrease the recreational experience of another area.

Defined Area: This policy applies to a defined area of the coastal zone, specifically areas designated for recreation use as described in Section 4.5.1 (Chapter 4).

Sensitivity to Development: Recreation is sensitive to development as described in Section 5.12.3.2. The degree of sensitivity relates to the type of recreation in an area. For example, noise would be a significant adverse impact in a backcountry recreation area used by hikers. Some types of noise may not be important to recreation users who use means of transportation that create noise such as motorized vehicles.

Not Adequately Addressed: In general, recreation is not adequately addressed in state or federal laws. Individual landowners have regulations and statutes that apply to specific areas designated for recreation, but these laws do not apply to all areas, and none of them specifically address the issues in this policy. Specifically, they do not address alternatives when there may be significant adverse impacts to recreation, and they do not mention scenic resources.

There are 5 units managed by the Alaska Division of Parks and Outdoor Recreation: Ft. Abercrombie State Historic Park (186 acres), Buskin River State Recreation Site (168 acres), Pasagshak State Recreation Site (20 acres), Shuyak Island State Park (47,000 acres), and Afognak State Park (112 acres). Laws addressing Shuyak Island State Park include AS 41.21.170 and 11 AAC 20,800 -815. Laws addressing Afognak State Park include AS 41.21.185 and 11 AAC 20.700 – 720. These laws provide very general direction such as access provisions and allowable uses including campfires, motorized boats, aircraft and bicycles.

General restrictions for state park land are provided in 11 AAC 12.010 – 250. 11 AAC 12.171 requires a permit for disturbances to natural objects. Regulations require special park use permits

in 11 AAC 18 including competitive and noncompetitive park use permits. General guidance directs that permits not be given to activities that would adversely affect resources, but no specific criteria is provided in the regulations. Regulations for recreation rivers are provided in 11 AAC 09.

Other statutes and regulations reviewed include the following: AS 05.20 (Recreational Devices), AS 05.25 (Watercraft), AS 05.35 (Sports Facilities Grants), AS 05.45 (Ski Liability), AS 38.04 (Settlement), 38.05.125 – 128 (Reservation, Access to Navigable Waters, Obstructions), AS 38.05.295 (Parks and Recreation Areas), AS 38.05.300 (Classification), AS 38.05.820 – 821 (Tideland), AS 41.21 (Parks and Recreational Facilities), 11 AAC 05 (Fees), 11 AAC 07 (Boating Safety), 11 AAC 15 (Trails and Footpaths Grant Program), 11 AAC 16 (Historic, Prehistoric and Archaeological Resources), 11 AAC 17 (Outdoor Recreational, Open Space, and Historic Properties Development Fund Program),

Unique Concern: Recreation is a unique concern to the KIB because many of its residents choose to live in the borough because of the wide variety of outdoor recreation opportunities. In addition, the growing tourism economy is also dependent of multiple recreational opportunities. This issue is discussed in more detail in Section 5.12.3.1 (Chapter 5).

Policy H-2 Minimizing Conflicts from Commercial Recreation/Tourism Use

a. Commercial recreation or tourism activities on public lands and waters, or on private lands and waters where the landowner has granted formal permission for recreational activities, shall be located, designed, constructed, and operated to minimize significant adverse impacts to:

- 1. Wildlife habitat and populations,*
- 2. The wilderness experience, and*
- 3. Commercial, personal, and subsistence use of natural resources.*

b. The applicant must submit a site plan and a plan of operations with the consistency certification that addresses the project proposal and anticipated effects of the project including cumulative effects on the existing recreation uses in the area caused by the applicant's proposed use. Project activities shall not interfere with other permitted activities on private lands.

c. This policy applies to areas designated for recreation under 11 AAC 114.250(c) as described in Section 4.5.1, and it applies to all uses and activities that could affect recreational values described in the resource inventory and analysis.

Note: The KIB removed this policy from the final plan in response to comments in the Final Recommendation to the Commissioner.

Subject Use: Designated recreation areas under 11 AAC 114.250(c).

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250(c)). Specifically, the uses and activities relate to those associated with designated areas that receive significant recreational

use or have the potential for such use because of physical, biological or cultural features. The justification for the designated recreation areas is provided earlier in this appendix.

The policy is clear and concise regarding the requirements, the activities and the persons affected by it. The policy uses precise, prescriptive and enforceable language. The requirements of the policy can be met by demonstrating that significant adverse impacts to recreation have been avoided or minimized. The policy allows for such activities if an alternative recreational experience can be provided that does not decrease the recreational experience of another area.

Defined Area: This policy applies to a defined area of the coastal zone, specifically areas designated for recreation use as described in Section 4.5.1 (Chapter 4).

Sensitivity to Development: Recreation is sensitive to development as described in Section 5.12.3.2. The degree of sensitivity relates to the type of recreation in an area. For example, noise would be a significant adverse impact in a backcountry recreation area used by hikers. Some types of noise may not be important to recreation users who use means of transportation that create noise such as motorized vehicles.

Not Adequately Addressed: In general impacts to recreation are not adequately addressed in state or federal laws. Individual landowners have regulations and statutes that apply to specific areas designated for recreation, but these laws do not apply to all areas, and they do not adequately address the impacts of commercial recreation on other types of recreation.

There are 5 units managed by the Alaska Division of Parks and Outdoor Recreation: Ft. Abercrombie State Historic Park (186 acres), Buskin River State Recreation Site (168 acres), Pasagshak State Recreation Site (20 acres), Shuyak Island State Park (47,000 acres), and Afognak State Park (112 acres). Laws addressing Shuyak Island State Park include AS 41.21.170 and 11 AAC 20.800 -815. Laws addressing Afognak State Park include AS 41.21.185 and 11 AAC 20.700 – 720. These laws provide very general direction such as access provisions and allowable uses including campfires, motorized boats, aircraft and bicycles.

General restrictions for state park land are provided in 11 AAC 12.010 – 250. 11 AAC 12.171 requires a permit for disturbances to natural objects. Regulations require special park use permits in 11 AAC 18 including competitive and noncompetitive park use permits. General guidance directs that permits not be given to activities that would adversely affect resources, but no specific criteria is provided in the regulations. Regulations for recreation rivers are provided in 11 AAC 09.

Other statutes and regulations reviewed include the following: AS 05.20 (Recreational Devices), AS 05.25 (Watercraft), AS 05.35 (Sports Facilities Grants), AS 05.45 (Ski Liability), AS 38.04 (Settlement), 38.05.125 – 128 (Reservation, Access to Navigable Waters, Obstructions), AS 38.05.295 (Parks and Recreation Areas), AS 38.05.300 (Classification), AS 38.05.820 – 821 (Tideland), AS 41.21 (Parks and Recreational Facilities), 11 AAC 05 (Fees), 11 AAC 07 (Boating Safety), 11 AAC 15 (Trails and Footpaths Grant Program), 11 AAC 16 (Historic, Prehistoric and Archaeological Resources), 11 AAC 17 (Outdoor Recreational, Open Space, and Historic Properties Development Fund Program),

Unique Concern: Recreation is a unique concern to the KIB because many of its residents choose to live in the borough because of the wide variety of outdoor recreation opportunities. In addition, the growing tourism economy is also dependent of multiple recreational opportunities. This issue is discussed in more detail in Section 5.12.3.1 (Chapter 5).

Policy H-3: Maintaining Traditional Public Access

- a. Restrictions on traditional methods and means of public recreational access across municipal, state and federal land shall be minimized. Elements of public access include roads, waterways, trails, and marine anchorages. Prior to disposal of public lands, public access routes shall be identified and easements reserved.*
- b. This policy is established for areas designated for recreation under 11 AAC 114.250(c) as described in Section 4.5.1, and it applies to all uses and activities that could affect recreational values described in the resource inventory and analysis.*

Note: This policy was added after DNR issued the Preliminary Recommendation to the Commissioner. The KIB removed this policy from the final plan in response to comments in the Final Recommendation to the Commissioner. DNR stated that it was not permissible to add new policies after the comment period on the plan had ended.

I. Archaeological and Historic Resources**Policy I-1: Consultation and Surveys**

- a. Applicants proposing to conduct activities that could reasonably be expected to significantly affect historic or prehistoric resources shall develop a plan for inclusion in the project description that demonstrates how these resources will be protected. The applicant shall consult with the State Historic Preservation Officer (SHPO), the Alutiiq Museum and the Kodiak Area Native Association (KANA) to determine if a plan must be developed.*
- b. Within 14 days of being contacted by an applicant, and when there is a reasonable expectation that a historic or prehistoric resource could be disturbed, the SHPO may require the applicant to complete an evaluation of potential impacts to cultural and historic resources.*
- c. The applicant shall incorporate site-specific measures into the project description to protect a specific resource known or likely to occur on the project site.*
- d. This policy is established for areas designated for the study, understanding and illustration of history and prehistory under 11 AAC 114.250(i) as described in Section 4.5.4. It applies to all uses and activities that could affect these resources.*

Note: The KIB revised this policy to respond to comments in the Preliminary Recommendation to the Commissioner. It was revised again to respond to comments in the Final Recommendation to the Commissioner.

Subject Use: Areas designated as important to the study, understanding and illustration of history and prehistory (11 AAC 114.250(i))

Criteria: This policy meets the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250(i)). In this case, the uses and activities include any actions that would affect the historic or prehistoric resources in the designated area. The justification for the area designations is provided earlier in this appendix, and a description of the designation is included in Section 4.5.4 (Chapter 4) and in Section 5.5.1 (Chapter 5).

The policy is clear and concise regarding the requirements, the activities and the persons affected by it. The policy uses precise, prescriptive and enforceable language. The policy requires a tiered process. A plan to respond to discovery of possible historic resources is only required if SHPO, KANA or the Alutiq Museum request one. When there are concerns that a resource may occur on the site, SHPO may require a survey. During the project review, SHPO may require alternative measures be adopted into the project description.

Defined Area: This policy applies to a defined area of the coastal zone, specifically areas designated for the study understanding and illustration of history and prehistory as described in Section 4.5.1 (Chapter 4)) and in Section 5.5.1 (Chapter 5).

Sensitivity to Development: Historic and prehistoric resources are extremely sensitive to development. Activities that destroy or alter prehistoric resources permanently eliminate information that could be useful to the study and understanding of such resources. Once prehistoric resources are destroyed, they are gone forever. Activities that affect historic resources can also affect these resources and negatively affect the resident of the district. The sensitivity of these resources is discussed in more detail in Section 5.5.3.2 (Chapter 5).

Not Adequately Addressed: This policy is necessary because existing laws are inadequate as explained below. The policy adds more specificity to state and federal law because it requires a tiered process for prevention of damage to historic or prehistoric sites. The applicant is required to consult with SHPO, KANA or the Alutiq Museum, and unless these organizations indicated there is a reasonable chance of significant effects to historic or prehistoric resources, no more action is required of the applicant.

This policy was combined with the Policy J-2 of the Public Hearing Draft. As requested by the DNR, OPMP comments, policies proposed by the Aleutians West CRSA and the Haines coastal district were reviewed when revising the language of the policy. In addition, the language about site-specific measures was clarified. As requested by SHPO staff, the policy was changed to focus on actions taken by the applicant rather than the consulting parties and the Alutiq Museum was added to the policy.

Federal and state laws were consulted, and it was determined that this policy does not duplicate or restate provisions in the act. The legislation is discussed below.

The Antiquities Act (16 U.S.C. 431 - 433) of 1906 authorizes the President to designate national monuments to protect objects or areas of historic or scientific interest. The act requires permits for examination of ruins, excavation of archaeological sites and the gathering of objects of antiquity on lands under the jurisdiction of the Secretaries of Interior, Agriculture, and Army.

The Archaeological Resources Protection Act (16 U.S.C. 470 et seq.) of 1979 succeeded provisions of the Antiquities Act for archaeological items. It establishes detailed requirements for issuance of permits for any excavation for or removal of archaeological resources from federal or

Indian lands. It also establishes penalties for the unauthorized excavation, removal, or damage of any such resources.

The Historic Sites, Buildings and Antiquities Act (16 U.S.C. 461 et seq.) of 1935, commonly referred to as the Historic Sites Act, established a national policy to preserve historic sites and objects of national significance. It establishes procedures for designation, acquisition, administration and protection of such sites. The Archeological and Historic Preservation Act (16 U.S.C. 469 et seq.) of 1960 carries out policy established by the Historic Sites Act

The National Historic Preservation Act 1966 (16 USC 470 et seq.) provides a framework for protecting historic sites. Section 101 establishes the National Register of Historic Places to protect districts, sites, buildings, and other objects significant for American history, architecture, archaeology or culture. Section 101 also establishes authority for National Historic Landmarks, and it includes a provision for State Historic Preservation Officers. Section 108 establishes the Historic Preservation Fund which provides matching grants to states. The act establishes the Advisory Council on Historic Preservation, an independent agency.

The Native American Graves Protection and Repatriation (24 USC 3001 et seq.) of 1990 and associated regulations (43 CFR 10) require federal agencies and museums that have received federal funding to return certain Native American cultural items to lineal descendants, and culturally affiliated Indian tribes and Native Hawaiian organizations. The Smithsonian Institution is governed by different legislation, the National Museum of the American Indian Act of 1989, 20 U.S.C. 80.

State laws consulted include AS 41.35.010 - .240; 11 AAC 16.010 - .900; and 11 AAC 12.175. These laws do not adequately address concerns of the district. The State Historic Preservation Act only applies to state lands, and the policy does not duplicate provisions in the law and associated regulations. Without the policy, it is likely that historic and prehistoric sites will be damaged.

Subsection a of the statewide Historic, Prehistoric and Archaeological Resources (11 AAC 112.320) directs the DNR to designate areas of the coastal zone as important to the study, understanding or illustration of national, state, or local history or prehistory, including natural processes. Subsection b requires that projects in areas designated by the state comply with state statutes and regulations. This standard does not adequately address concerns of the district for two reasons. First, designation of areas by the state is not meaningful because the requirement to comply with state law is redundant because activities must comply with state laws regardless of such a requirement in ACMP regulations. Second, this standard is not a subject use for which a district policy may be written. Third, the ability to designate “natural processes” is unclear because it is not defined. This term is not used in 11 AAC 114.250(i).

Unique Concern: Historic and prehistoric resources are a unique concern to the district because these resources are important for the cultural identity of the people of the region. For Native people, cultural and archaeological resources help define who they are. For other residents, these resources provide a sense of identity for the area in which they live. Likewise, historic resources give residents a sense of place and a respect for the area in which they live. The unique concern of this resource is discussed in the Resource Analysis in Section 5.5.3.1.

Policy I-2: Resource Protection

a. Uses and activities which may adversely affect cultural resource areas shall comply with the following standards:

- 1. Archaeological, prehistoric and historic resources shall be protected from significant adverse impacts caused by surrounding uses and activities.*
- 2. Known artifacts of significant historic, prehistoric or archeological importance shall not be disturbed during project development unless the SHPO, in consultation with the landowner and KIB, approves the action.*
- 3. If previously undiscovered artifacts or areas of historic, prehistoric or archaeological importance are encountered during development, the SHPO, the landowner and the KIB shall be notified and the site shall be protected from further disturbance pending evaluation by the SHPO. Such evaluation shall be completed in a timely manner.*

b. This policy is established for areas designated for the study, understanding and illustration of history and prehistory under 11 AAC 114.250(i) as described in Section 4.5.4. It applies to all uses and activities that could affect these resources.

Note: The Final Recommendation to the Commissioner recommended this policy be approved without any changes.

Subject Use: Areas designated as important to the study, understanding and illustration of history and prehistory (11 AAC 114.250(i))

Criteria: This policy meets the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250(i)). In this case, the uses and activities include any actions that would affect the historic or prehistoric resources in the designated area. The justification for the area designations is provided earlier in this appendix, and a description of the designation is included in Section 4.5.4 (Chapter 4) and in Section 5.5.1 (Chapter 5).

The policy is clear and concise regarding the requirements, the activities and the persons affected by it. The policy uses precise, prescriptive and enforceable language. The policy requires a tiered process. A plan to respond to discovery of possible historic resources is only required if SHPO, KANA or the Alutiq Museum request one. When there are concerns that a resource may occur on the site, SHPO may require a survey. During the project review, SHPO may require alternative measures be adopted into the project description.

Defined Area: This policy applies to a defined area of the coastal zone, specifically areas designated for the study understanding and illustration of history and prehistory as described in Section 4.5.1 (Chapter 4)) and in Section 5.5.1 (Chapter 5).

Sensitivity to Development: Historic and prehistoric resources are extremely sensitive to development. Activities that destroy or alter prehistoric resources permanently eliminate

information that could be useful to the study and understanding of such resources. Once prehistoric resources are destroyed, they are gone forever. Activities that affect historic resources can also affect these resources and negatively affect the resident of the district. The sensitivity of these resources is discussed in more detail in Section 5.5.3.2 (Chapter 5).

Not Adequately Addressed: This policy is necessary because existing laws are inadequate as explained below. The policy adds more specificity to state and federal law because it requires a tiered process for prevention of damage to historic or prehistoric sites. The applicant is required to consult with SHPO, KANA or the Alutiq Museum, and unless these organizations indicated there is a reasonable chance of significant effects to historic or prehistoric resources, no more action is required of the applicant.

This policy was combined with the Policy J-2 of the Public Hearing Draft. As requested by the DNR, OPMP comments, policies proposed by the Aleutians West CRSA and the Haines coastal district were reviewed when revising the language of the policy. In addition, the language about site-specific measures was clarified. As requested by SHPO staff, the policy was changed to focus on actions taken by the applicant rather than the consulting parties and the Alutiq Museum was added to the policy.

Federal and state laws were consulted, and it was determined that this policy does not duplicate or restate provisions in the act. The legislation is discussed below.

The Antiquities Act (16 U.S.C. 431 - 433) of 1906 authorizes the President to designate national monuments to protect objects or areas of historic or scientific interest. The act requires permits for examination of ruins, excavation of archaeological sites and the gathering of objects of antiquity on lands under the jurisdiction of the Secretaries of Interior, Agriculture, and Army.

The Archaeological Resources Protection Act (16 U.S.C. 470 et seq.) of 1979 succeeded provisions of the Antiquities Act for archaeological items. It establishes detailed requirements for issuance of permits for any excavation for or removal of archaeological resources from federal or Indian lands. It also establishes penalties for the unauthorized excavation, removal, or damage of any such resources.

The Historic Sites, Buildings and Antiquities Act (16 U.S.C. 461 et seq.) of 1935, commonly referred to as the Historic Sites Act, established a national policy to preserve historic sites and objects of national significance. It establishes procedures for designation, acquisition, administration and protection of such sites. The Archeological and Historic Preservation Act (16 U.S.C. 469 et seq.) of 1960 carries out policy established by the Historic Sites Act

The National Historic Preservation Act 1966 (16 USC 470 et seq.) provides a framework for protecting historic sites. Section 101 establishes the National Register of Historic Places to protect districts, sites, buildings, and other objects significant for American history, architecture, archaeology or culture. Section 101 also establishes authority for National Historic Landmarks, and it includes a provision for State Historic Preservation Officers. Section 108 establishes the Historic Preservation Fund which provides matching grants to states. The act establishes the Advisory Council on Historic Preservation, an independent agency.

The Native American Graves Protection and Repatriation (24 USC 3001 et seq.) of 1990 and associated regulations (43 CFR 10) require federal agencies and museums that have received federal funding to return certain Native American cultural items to lineal descendants, and culturally affiliated Indian tribes and Native Hawaiian organizations. The Smithsonian Institution

is governed by different legislation, the National Museum of the American Indian Act of 1989, 20 U.S.C. 80.

State laws consulted include AS 41.35.010 - .240; 11 AAC 16.010 - .900; and 11 AAC 12.175. These laws do not adequately address concerns of the district. The State Historic Preservation Act only applies to state lands, and the policy does not duplicate provisions in the law and associated regulations. Without the policy, it is likely that historic and prehistoric sites will be damaged.

Subsection a of the statewide Historic, Prehistoric and Archaeological Resources (11 AAC 112.320) directs the DNR to designate areas of the coastal zone as important to the study, understanding or illustration of national, state, or local history or prehistory, including natural processes. Subsection b requires that projects in areas designated by the state comply with state statutes and regulations. This standard does not adequately address concerns of the district for two reasons. First, designation of areas by the state is not meaningful because the requirement to comply with state law is redundant because activities must comply with state laws regardless of such a requirement in ACMP regulations. Second, this standard is not a subject use for which a district policy may be written. Third, the ability to designate “natural processes” is unclear because it is not defined. This term is not used in 11 AAC 114.250(i).

Unique Concern: Historic and prehistoric resources are a unique concern to the district because these resources are important for the cultural identity of the people of the region. For Native people, cultural and archaeological resources help define who they are. For other residents, these resources provide a sense of identity for the area in which they live. Likewise, historic resources give residents a sense of place and a respect for the area in which they live. The unique concern of this resource is discussed in the Resource Analysis in Section 5.5.3.1.

Policy J-1: Oil and Gas Exploration and Development

a. Applicants proposing to conduct exploration or development of oil and gas resources, including support activities, shall document in the project description how they have worked with the Borough and representatives of affected communities to site oil and gas activities to minimize:

- 1. Adverse offshore and onshore impacts, including habitat, subsistence, social, cultural, and economic impacts, and*
- 2. Interference with commercial fishing and subsistence activities*

b. This policy is established under the statewide Energy Facilities standard (11 AAC 112.230) subject use, and it applies to all uses and activities related to the siting of energy facilities.

Note: Three comments were received on this policy in response to the public comment period on the Public Review Draft. In response to comments from OPMP, the policy was rewritten to address siting of energy facilities, a justification was made for writing a policy for 11 AAC 112.230 without designating the area (see criteria below), and a justification was added regarding why the energy facilities standard does not adequately address this issue. In response to a comment from DEC, the term “environmental impacts” was removed. The phrase “maximize benefits to local residents” was removed in response to a comment from the Minerals Management Service.

In response to DNR comments in the Final Recommendation to the Commissioner, the KIB removed this policy from the final plan.

Subject Use: Energy Facilities standard (11 AAC 112.230)

Criteria: This policy meets the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 112.112.230). In this case, the uses and activities include those related to the siting of energy facilities. Because 11 AAC 112.230 is listed separately in 11 AAC 114.250 as an acceptable subject use, it is not necessary to designate an area under 11 AAC 114.250(e) in order to have a policy about the siting of energy facilities.

The policy is clear and concise regarding the requirements, the activities and the persons affected by it. The policy uses precise, prescriptive and enforceable language. It requires the applicant document in the project description that it has worked with the borough and communities to minimize impact from the siting of energy facilities.

Defined Area: This policy applies to a defined area of the coastal zone, specifically areas where oil and gas development may be proposed. Energy facility development is discussed in section in section 5.8 (Chapter 5).

Sensitivity to Development: Coastal resources are sensitive to development of energy facilities. Specifically, energy facility development can result in significant effects to commercial fishing and subsistence uses and habitat, subsistence, cultural and economic resources. The sensitivity of these resources is discussed in more detail in Section 5.8.2.2 and 5.8.2.3 (Chapter 5).

Not Adequately Addressed: This policy is necessary because existing laws are inadequate as explained below. The policy adds more specificity to state and federal law because it requires consultation with the borough and because it is more specific than state or federal laws.

No comments were received from the DNR, Division of Oil and Gas, The following federal and state laws were consulted, however, and it was determined that this policy does not duplicate or restate provisions.

- The energy facilities standard does not adequately address the matter because: there is no requirement for the applicant to consult with the borough and there is no requirement in the standard to minimize impacts to subsistence, habitat, social, cultural and economic impacts.
- AS 38.05.025 et seq. outlines the requirements for best interest findings by DNR including subsection (g) which deals with findings for oil and gas lease sales.
- AS 38.05.180, oil and gas leasing, was consulted and the policy does not repeat provisions in that law.
- 11 AAC 83.158, plan of operations, was consulted and the policy does not repeat its provisions. Unlike the regulation, the policy is enforceable. The regulation states that the “commissioner will require amendments that the commissioner determines necessary to protect the state’s interest.” There is no provision to protect the district’s interests.
- 11 AAC 83.341 - 346, unit plan of exploration, operation and development, were consulted, and the policy is more specific. While the regulation does require the applicant to identify means to minimize impacts to habitats, this provision only applies to state lands.

- 11 AAC 96.005 et seq., General Land Use Activity, was consulted. These regulations address use of explosives, exploratory drilling and geophysical exploration, but they do include the same requirements as the policy.
- 30 CFR 250.203, exploration plans, outlines what is needed for a Minerals Management Service exploration plan. This regulation includes requirements for what must be in the plan but it does not include the specificity of the policy.
- 30 CFR 250.204, development and production plan, includes requirements for what must be in the plan but it does not include the specificity of the policy.

Unique Concern: Both uses related to energy development as well as resources affected by it are a unique concern to the coastal district for a number of reasons. Potential adverse effects from energy development could affect the KIB and its residents by threatening coastal resources and uses, including commercial fishing and subsistence hunting and fishing. The most important effect energy development is a potential oil spill from oil and gas exploration and development. As well, local benefits of energy development, including employment, taxes and multiplier effects, make energy facilities a unique concern to the district. The unique concern of this resource is discussed in the Resource Analysis in Section 5.8.2.1.

Policy J-2: Geophysical Surveys

a. Geophysical surveys in coastal waters shall be located, designed, and conducted to avoid disturbances to fish and wildlife populations, habitats, and harvests of fish and wildlife. Geophysical surveys shall be timed to avoid commercial fishing openings and out-migration of salmon smolt. Use of explosives for geophysical surveys is not allowed in coastal waters. Geophysical surveys in fresh and marine waters supporting fish or wildlife shall use energy sources such as air guns, gas exploders, or other sources that have been demonstrated to not significantly affect fish and wildlife.

b. This policy is established under the statewide Energy Facilities standard (11 AAC 112.230) subject use, and it applies to all uses and activities related to the siting of energy facilities.

Note: In response to DNR comments in the Final Recommendation to the Commissioner, the KIB removed this policy from the final plan.

Subject Use: Energy Facilities standard (11 AAC 112.230)

Criteria: This policy meets the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250(i)). In this case, the uses and activities include activities related to geophysical surveys, sometimes called seismic surveys. Seismic surveys are considered oil and gas exploration activities, and exploration is included in the definition of a “major energy facility” 11 AAC 112.990(14)(A)(i).

The policy is clear and concise regarding the requirements, the activities and the persons affected by it. The policy uses precise, prescriptive and enforceable language. It requires the applicant document in the project description that it has worked with the borough and communities to minimize impact from the siting of energy facilities. The policy requires timing of surveys outside of commercial fishing openings and during the out migration of smolt. It disallows the use

of explosives in coastal waters, and it requires use of air guns, gas exploders, or other means that will not have significant effects to fish and wildlife.

Defined Area: This policy applies to a defined area of the coastal zone, specifically coastal waters where geophysical exploration may occur.

Sensitivity to Development: Coastal resources are sensitive to development of energy facilities. Specifically, energy facility development can result in significant effects to commercial fishing and subsistence uses and habitat, subsistence, cultural and economic resources. The sensitivity of these resources is discussed in more detail in Section 5.8.2.2 and 5.8.2.3 (Chapter 5).

Not Adequately Addressed: This policy is necessary because existing laws are inadequate as explained below.

No comments were received from the DNR, Division of Oil and Gas, The following federal and state laws were consulted, however, and it was determined that this policy does not duplicate or restate provisions.

- The energy facilities standard is inadequate because it does not specifically address the effects of seismic surveys. Seismic surveys, however, are exploration activities that are included in the definition of a major energy facility.
- AS 38.05.025 et seq. outlines the requirements for best interest findings by DNR including subsection (g) which deals with findings for oil and gas lease sales.
- AS 38.05.180, oil and gas leasing, was consulted, and the policy does not repeat provisions in that law.
- 11 AAC 83.158, plan of operations, was consulted and the policy does not repeat its provisions. A plan of operations is not needed for seismic surveys.
- 11 AAC 83.341 - 346, unit plan of exploration, operation and development, were consulted and these regulations do not include the same requirements as this policy.
- 11 AAC 96.005 et seq., General Land Use Activity, was consulted. These regulations address use of explosives, exploratory drilling and geophysical exploration. Specifically, 11 AAC 96.210 -240 address seismic exploration and stratigraphic tests. These regulations do not include the same specificity as the policy.
- 30 CFR 250.203, exploration plans, outlines what is needed for a Minerals Management Service exploration plan. This regulation includes requirements for what must be in the plan but it does not include the specificity of the policy. These plans only apply to the OCS, and policies cannot be written specifically for the OCS.
- 30 CFR 250.204, development and production plan, includes requirements for what must be in the plan but it does not include the specificity of the policy. These plans only apply to the OCS, and policies cannot be written specifically for the OCS.

Unique Concern: Both uses related to energy development as well as resources affected by it are a unique concern to the coastal district for a number of reasons. Potential adverse effects from energy development could affect the KIB and its residents by threatening coastal resources and uses, including commercial fishing and subsistence hunting and fishing. The most important effect energy development is a potential oil spill from oil and gas exploration and development. As well, local benefits of energy development, including employment, taxes and multiplier effects, make energy facilities a unique concern to the district. The unique concern of this resource is discussed in the Resource Analysis in Section 5.8.2.1.

PolicyJ-3: Dismantlement, Restoration and Rehabilitation

a. Applicants shall include a plan for the dismantlement, restoration and rehabilitation of oil and gas facilities with the application packet that includes specific measures that will be implemented to return the area to pre-project conditions to the extent feasible. The plan shall establish when the measures will be implemented.

b. This policy is established for all areas designated for subsistence use and important habitat under 11 AAC 114.250 and as described in Section 4.5

Note: The KIB revised this policy in response to comments on the Public Review draft. Specifically, it included a summary of the GAO report cited in the plan (see Section 5.8.2.2). In response to DNR comments in the Final Recommendation to the Commissioner, the KIB removed this policy from the final plan.

Subject Use: Areas designated for subsistence and important habitat (11 AAC 112.250(g) and (h))

Criteria: This policy meets the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250(i)). In this case, the uses and activities include those related to oil and gas facilities as they affect important habitat and areas designated as important for subsistence. The specific coastal uses and resources are described in the area designations for subsistence areas and important habitat areas.

The policy is clear and concise regarding the requirements, the activities and the persons affected by it. The policy uses precise, prescriptive and enforceable language. It requires the applicant document in the project description that it has worked with the borough and communities to minimize impact from the siting of energy facilities.

Defined Area: This policy applies to a defined area of the coastal zone, specifically areas designated as important for subsistence as described in Section 4.5.6 and Section 5.4.1 and as important habitat as described in Section 4.5.3 and in Section 5.5.1.

Sensitivity to Development: Coastal resources are sensitive to development of energy facilities. Specifically, energy facility development can result in significant effects to commercial fishing and subsistence uses and habitat, subsistence, cultural and economic resources. The sensitivity of these resources is discussed in more detail in Section 5.8.2.2 and 5.8.2.3 (Chapter 5).

Not Adequately Addressed: This policy is necessary because existing laws are inadequate as explained below. No comments were received from the DNR, Division of Oil and Gas, The following federal and state laws were consulted, however, and it was determined that this policy does not duplicate or restate provisions.

- The energy facilities standard is inadequate because it does not address Dismantlement, Rehabilitation and Restoration (DRR). The removal of facilities is directly related to restoration of the habitat where energy facilities are sited, so this standard does not adequately address the matter.

- AS 38.05.025 et seq. outlines the requirements for best interest findings by DNR including subsection (g) which deals with findings for oil and gas lease sales. This regulation does not specifically address DRR requirements.
- AS 38.05.180, oil and gas leasing, was consulted, and the policy does not repeat provisions in that law. This regulation does not specifically address DRR requirements.
- 11 AAC 83.158, plan of operations, was consulted and the policy does not repeat its provisions. Subsection d, paragraph (3) requires plans for rehabilitation, but the regulation is inadequate because it does not specify what must be in the plans. The policy is more precise, prescriptive and enforceable.
- 11 AAC 83.341 - 346, unit plan of exploration, operation and development, were consulted. Similar to the plan of operations, the unit plan of operations must include plans for rehabilitation. Again, this regulation is inadequate because it does not specify what must be in those plans.
- 11 AAC 96.005 et seq., General Land Use Activity, was consulted. These regulations address use of explosives, exploratory drilling and geophysical exploration. This regulation does not address DRR for oil and gas.
- 30 CFR 250.203, exploration plans, outlines what is needed for a Minerals Management Service exploration plan. This regulation includes requirements for what must be in the plan but it does not include the specificity of the policy. These plans only apply to the OCS, and policies cannot be written specifically for the OCS.
- 30 CFR 250.204, development and production plan, includes requirements for what must be in the plan but it does not include the specificity of the policy. These plans only apply to the OCS, and policies cannot be written specifically for the OCS.

Section 5.8.22 of the plan summarizes a 2002 report about DRR requirements on Alaska's North Slope. It found that state and federal DRR requirements are not adequate to ensure that restoration will be completed once the facilities are no longer needed (GAO 2002).¹ Two state agencies are responsible for most of the DRR, the Alaska Oil and Gas Conservation Commission (AOGCC) and the Alaska Department of Natural Resources (DNR).² The AOGCC provides guidance for plugging and abandoning wells, but it has minimal requirements for surface facilities. Its requirements become effective only after all well sites abandoned on producing well pad.

As the landowner for most North Slope oil facilities, the DNR has a major responsibility for implementing DRR requirements. The GAO found DNR lease agreements do not include specific DRR requirements. Instead, lease terms notify lessees that they will be required to rehabilitate areas to the "satisfaction of the state." Also, the lease terms also state that a lessee "may leave infra-structure behind at option of state." Unit operating agreements, put in place after the leasing process, provide general DRR terms but are not activated until the unit agreement is terminated. In addition, the GAO found that DNR has no formal way to evaluate the creditworthiness of a lessee, since the lease provides no specifications for what needs to be removed and to what condition the land must be restored. DRR requirements are not generally imposed until all oil production has ceased within a unit, and to date, no units have concluded production on the North Slope.

In addition to the DNR, the Army Corps of Engineers (ACE), Native landowners, and the North Slope Borough have authority to impose DRR requirements. Generally, however, these agencies

¹ The General Accounting Office (GAO) is the research branch for Congress.

² In addition, the Alaska Department of Environmental Conservation (DEC) regulates disposal of drilling muds and cuttings, flaring, wastewater, and oil spill prevention and response.

do not establish DRR expectations at the outset of a project. According to the GAO, a state-industry task force in the early 1990s explored options for DRR requirements but failed to develop an agreement.

The ACE generally defers to the landowner for DRR requirements, but it may impose restoration requirements upon abandonment of a facility. The approval for the Alpine Development Project provided an exception to this trend by establishing requirements in the initial approval for removal of gravel and restoration of hydrological conditions.

Unlike other State of Alaska or federal agencies, the MMS has specific DRR requirements in its regulations including an assumption about the costs for DRR and substantial bonding requirements. Similarly, there are explicit DRR requirements for the Trans-Alaska Pipeline System.

The BLM established an overall restoration goal for the NPR-A for returning land to a condition similar to previous uses (i.e., fish and wildlife habitat and subsistence use). In addition, it requires a surface reclamation plan with the development application as well as an abandonment plan before abandonment begins.

While recent oil and gas activities on the North Slope follow strict environmental practices, former wells drilled in the NPR-A by the federal government were improperly abandoned. The BLM estimates that it would cost more than \$16 million to rehabilitate sites near Umiat in the NPR-A.

The GAO report made a number of additional findings, including:

- The State of Alaska lacks North Slope restoration goals and DRR requirements,
- Development of goals prior to oil and gas activities would provide for greater transparency and establish what restoration will be required (GAO 2002, p. 80),
- There are no assurances a company will continue to operate in Alaska and that they will be committed to restore sites when facilities are no longer needed,
- Bonding does not adequately reflect actual costs for DRR, and
- Some oil companies would prefer more specific guidance.

Considering the lack of DRR requirements at the state and federal level, Alaska municipalities may want to consider providing DRR guidelines in their coastal management plans, municipal codes or through mitigation measures for specific projects.

Unique Concern: Both uses related to energy development as well as resources affected by it are a unique concern to the coastal district for a number of reasons. Potential adverse effects from energy development could affect the KIB and its residents by threatening coastal resources and uses, including commercial fishing and subsistence hunting and fishing. The most important effect energy development is a potential oil spill from oil and gas exploration and development. As well, local benefits of energy development, including employment, taxes and multiplier effects, make energy facilities a unique concern to the district. The unique concern of this resource is discussed in the Resource Analysis in Section 5.8.2.1.

Policy J-4: Offshore Oil and Gas Activities

- a. Effects to resources and uses of the coastal zone from the siting of offshore oil and gas activities shall be minimized.*
- b. The State of Alaska shall provide an opportunity for the KIB to comment on the effects of the project to air and water quality during the project review for projects not regulated by the Department of Environmental Coordination (DEC).*
- c. This policy is established under the statewide Energy Facilities standard (11 AAC 112.230) subject use, and it applies to all uses and activities related to the siting of energy facilities.*

Note: In response to DNR comments in the Final Recommendation to the Commissioner, the KIB removed this policy from the final plan.

Subject Use: Energy Facilities standard (11 AAC 112.230)

Criteria: This policy meets the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 112.112.230). In this case, the uses and activities include those related to the siting of energy facilities. Because 11 AAC 112.230 is listed separately in 11 AAC 114.250 as an acceptable subject use, it is not necessary to designate an area under 11 AAC 114.250(e) in order to have a policy about the siting of energy facilities.

The policy is clear and concise regarding the requirements, the activities and the persons affected by it. The policy uses precise, prescriptive and enforceable language. Subsection a requires the applicant minimize effects to coastal uses and resources. Subsection b requires that the district be included in reviews in situations when ACMP laws do not require involvement.

Defined Area: This policy applies to a defined area of the coastal zone, specifically areas where oil and gas development may be proposed. Energy facility development is discussed in section in section 5.8 (Chapter 5).

Sensitivity to Development: Coastal resources are sensitive to development of energy facilities. Specifically, energy facility development can result in significant effects to commercial fishing and subsistence uses and habitat, subsistence, cultural and economic resources. The sensitivity of these resources is discussed in more detail in Section 5.8.2.2 and 5.8.2.3 (Chapter 5).

Not Adequately Addressed: This policy is necessary because existing laws are inadequate as explained below. This policy applies to offshore oil and gas activities that could affect resources or uses of the KIB's coastal zone. State law is inadequate because there are no provisions for district participation in the review of impacts to air and water quality for OCS activities.

Since no DEC regulations or statutes apply to OCS activities, air and water quality effects of OCS activities may be addressed by a coastal district policy. AS 46.40.040(b) establishes that DEC laws and regulations "constitute the exclusive enforceable policies of the Alaska coastal management program for those purposes." It goes on to specifically reference DEC statutes and regulations after the phrase "for those purposes only. . ." Again, neither DEC regulations nor

statutes address OCS activities. The ACMP regulations and statutes are inadequate because there are no provisions in 11 AAC 110 to provide for district participation in DEC's comments on OCS projects, and because DEC has no authority to issue a permit for OCS activities, there is no opportunity to comment on air and water quality aspects of OCS projects. The policy does not specifically mention OCS activities because a policy may not specifically reference federal land or waters. A policy may apply to federal lands, however, under 11 AAC 110.015.

No comments were received from the DNR, Division of Oil and Gas, The following federal and state laws were consulted, however, and it was determined that this policy does not duplicate or restate provisions.

- The energy facilities standard is inadequate because it only has to be implemented to the extent practicable. Paragraph (1) requires siting of facilities to minimize "adverse environmental and social effects," but this requirement is inadequate because neither of these terms is defined. The term "coastal resource and use" is defined at AS 46.40.210, so this policy is more precise than the standard. This standard does not address district comments on OCS projects.
- AS 38.05.025 et seq. outlines the requirements for best interest findings by DNR including subsection (g) which deals with findings for oil and gas lease sales. This regulation does not specifically require minimization of impacts to coastal resources or uses, and it does not address procedures for district comments on OCS projects.
- AS 38.05.180, oil and gas leasing, was consulted, and the policy does not repeat provisions in that law.
- 11 AAC 83.158, plan of operations, was consulted and the policy does not repeat its provisions. This regulation requires the applicant to describe procedures that will minimize adverse effects to natural resources and uses. It is inadequate because it does not directly require minimization of effects. This requirement is only enforceable to the extent that the applicant include a description in the plan of the procedures
- 11 AAC 83.341 - 346, unit plan of exploration, operation and development, were consulted. Similar to plan of operations, unit plans of operations must include a description of procedures that will minimize effects to natural resources and uses. Again, the regulation is inadequate because it only requires a description of the procedures. The policy is more enforceable because it require minimization of impacts.
- 11 AAC 96.005 et seq., General Land Use Activity, was consulted. These regulations address use of explosives, exploratory drilling and geophysical exploration. This regulation does not require minimization of impacts.
- 30 CFR 250.203, exploration plans, outlines what is needed for a Minerals Management Service exploration plan. This regulation includes requirements for what must be in the plan. These plans only apply to the OCS, and policies cannot be written specifically for the OCS.
- 30 CFR 250.204, development and production plan, includes requirements for what must be in the plan. These plans only apply to the OCS, and policies cannot be written specifically for the OCS.

Unique Concern: Both uses related to energy development as well as resources affected by it are a unique concern to the coastal district for a number of reasons. Potential adverse effects from energy development could affect the KIB and its residents by threatening coastal resources and uses, including commercial fishing and subsistence hunting and fishing. The most important effect energy development is a potential oil spill from oil and gas exploration and development. As well, local benefits of energy development, including employment, taxes and multiplier

effects, make energy facilities a unique concern to the district. The unique concern of this resource is discussed in the Resource Analysis in Section 5.8.2.1.

Policy K-1: Siting of Material Sources

a. Sources of sand, gravel, rock and other construction materials shall be authorized in the following priority:

- 1. Upland sites, including river terraces above historic high water,*
- 2. Areas of low habitat value, including river bars,*
- 3. Streams which do not provide fish habitat, and*
- 4. Other habitats.*

b. This policy applies to areas designated for recreation under 11 AAC 114.250(c) as described in Section 4.5.1. This policy also applies to the Coastal Development standard (11 AAC 112.200)

Note: The KIB added a new subsection b after issuance of the Preliminary Recommendation to the Commissioner. In responses to comments in the Final Recommendation to the Commissioner, the KIB removed the new subsection b and changed the subject use to apply only to the statewide Sand and Gravel standard.

Subject Use: 11 AAC 112.260

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). It provides more specificity to the statewide standard by prioritizing the sources for sand and gravel in the district. The policy is specific as to the persons and activities covered by it.

Defined Area: This policy applies to a defined portion of the coastal zone, coastal areas within the district that contain sand and gravel in quantities suitable for mining

Sensitivity to Development: The sand and gravel sites are sensitive to development because extraction of these materials creates impacts to streams and streambeds, water flow and availability, and may disrupt or destroy habitat, affect viability and availability of fish stocks, affect floodplains, and cause the collapse of streambanks, among other potential adverse effects. The sensitivity to development is discussed in more detail in the resource analysis in Section 5.6.3.4.

Not Adequately Addressed: State and federal statutes and regulations do not adequately address sand and gravel extraction because they do not prioritize potential extraction sites. By prioritizing sand and gravel extraction sites, the district is able to minimize impacts to areas affected by extraction. Prioritization of sites also provides more predictability of the process for project applicants.

The Alaska Department of Natural Resources has several statutes and regulations that address material sales and other relevant work in water. None prioritize sand and gravel extraction sites.

AS 38.05.110 directs the DNR commissioner in appraisals and assessment of current market supply of materials offered for sale.

AS 38.05.115 directs the commissioner of DNR to determine the materials to be sold, and the limitations, conditions and terms of sale, including the utilization, development and maintenance of the sustained yield principle. This statute includes the concept of allocation, but not prioritization, of the resource.

AS 38.05.120 sets out the approved terms and methods of sale of materials by the DNR, but does not address prioritization.

AS 38.05.128 disallows obstruction or interference with the free passage or use of a navigable water unless certain authorizations are obtained. The statute does not address prioritization of materials extraction sites.

AS 38.05.810 allows for disposal of state land or resources for public and charitable use; it does not address sand and gravel extraction specifically, nor does it address prioritization of lands or resources for mining.

11 AAC 96.010 lists activities on state lands that require permits, including some equipment and mining methods. The regulation does not specifically address sand and gravel extraction, nor does it prioritize sites for mining activities.

11 AAC 97.250 requires reclamation of material sites, but does not address the subject of this policy.

The Office of Habitat Management and Permitting administers AS 41.14.840 (Fishway Act) and AS 41.14.870 (Anadromous Fish Act), which do not address prioritization of sand and gravel extraction sites.

Permits are required under federal law for work in water (40 CFR Part 230, 33 CFR Part 323, 33 CFR Part 325), and by the Alaska Department of Environmental Conservation under the Section 401 certification process. While these permitting processes may require project applicants to consider alternative sites for sand and gravel extraction, the statutes and regulations do not prioritize sand and gravel extraction sites.

Unique Concern: Sand and gravel extraction as addressed by this policy is a unique concern to the KIB because shoreline modifications, stream channel alterations, habitat alteration, fish productivity and other impacts affect resources and uses important to the district. This unique concern of this resource is discussed in the Resource Analysis in Section 5.6.3.4.

Policy K-2: In-stream Sand and Gravel Extraction

a. In-stream sand and gravel extraction, including bar scalping, skimming, dry-pit and wet-pit channel mining, bar excavation, in-stream gravel traps, and channel-wide in-stream mining within the annual floodplain is prohibited.

b. Gravel extraction from active flood plains and stream channels or other in-stream mining activities that intercept, modify or reduce natural sediment load or sediment transport characteristics of the stream or diminish natural water

discharge of the stream that could result in downstream channel morphology adjustments of reaches of the streams or changes in natural littoral sediment transport along adjacent shorelines shall be avoided.

c. Gravel extraction excavations and pits in stream terraces and inactive floodplains adjacent to alluvial channel streams shall be developed to prevent lowering of ground water tables and decrease of natural base flow downstream from the mining area caused by influent channel dewatering.

d. Extraction of sand and gravel from stream floodplains shall:

- 1. Be located to minimize changes to channel hydraulics and the potential for channel migration through the mining site, unless the changes to channel hydraulics are necessary to prevent erosion and only after a comprehensive site-specific geo-hydrologic study shows no significant short or long term adverse impact to in-stream or riparian habitats or the natural stream morphology and processes,*
- 2. Be located and conducted in such a manner as to not intercept or reduce natural high flow bed load sediment or interfere with natural high flow bed load sediment transport by the stream, and*
- 3. Not be removed from spawning or over-wintering habitat for anadromous fish unless the coordinating agency determines, after consultation with the borough, that there will be no significant impacts to fish habitat or reduction of fish productivity.*

e. This policy is established for designated as important habitat under 11 AAC 112.250(h) as described in Section 4.5.3. It applies to all uses and activities that affect the habitat functions related to the special productivity of the habitat.

Note: The KIB revised this policy slightly after issuance of the Preliminary Recommendation to the Commissioner. It removed the policy from the final plan in response to comments in the Final Recommendation to the Commissioner.

Subject Use: Important Habitat Area (11 AAC 114.250(h))

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). It provides more specificity to the statewide standard because it describes conditions that applicants must meet to minimize adverse impacts while mining sand and gravel. The measure is precise and prescriptive and adds predictability for project applicants.

Defined Area: This policy applies to a defined portion of the coastal zone because it applies to the areas designated as important habitat within the district's coastal boundaries.

Sensitivity to Development: The sand and gravel sites are sensitive to development because extraction of these materials creates impacts to streams and streambeds, water flow and availability, and may disrupt or destroy habitat, affect viability and availability of fish stocks, affect floodplains, and cause the collapse of streambanks, among other potential adverse effects.

The sensitivity to development is discussed in more detail in the resource analysis in Section 5.6.3.4.

Not Adequately Addressed: State and federal statutes and regulations do not adequately address sand and gravel extraction because they do not specify measures to minimize the impacts listed in this policy.

The Alaska Department of Natural Resources has several statutes and regulations that address material sales and other relevant work in water. None address specific measures to minimize the adverse impacts of materials extraction.

AS 27.19.020 requires a mining operation to be conducted in a manner that prevents unnecessary and undue degradation of land and water resources, and the mining operation shall be reclaimed as contemporaneously as practicable with the mining operation to leave the site in a stable condition.

AS 27.19.030 requires a mining operator to have a reclamation plan that is approved by the commissioner of DNR prior to the commencement of mining operations.

AS 27.19.050 exempts from the requirement of a reclamation plan a small mining operation of less than 5 acres of disturbance and less than 50,000 cubic yards of gravel or other materials disturbed or removed at one location in any year and a cumulative disturbed area of less than five acres at one location.

AS 38.05.110 directs the DNR commissioner in appraisals and assessment of current market supply of materials offered for sale.

AS 38.05.115 directs the commissioner of DNR to determine the materials to be sold, and the limitations, conditions and terms of sale, including the utilization, development and maintenance of the sustained yield principle. This statute includes the concept of allocation, but not effects of mining the resource.

AS 38.05.120 sets out the approved terms and methods of sale of materials by the DNR, but does not address effects of mining the resource.

AS 38.05.128 disallows obstruction or interference with the free passage or use of a navigable water unless certain authorizations are obtained. The statute does not address the effects of mining the resource.

AS 38.05.810 allows for disposal of state land or resources for public and charitable use; it does not address sand and gravel extraction specifically, nor does it address the effects of mining the resource.

11 AAC 96.010 lists activities on state lands that require permits, including some equipment and mining methods. The regulation does not specifically address sand and gravel extraction, nor does it effects of mining the resource.

11 AAC 97.250 requires reclamation of material sites, but does not address the subject of this policy.

The Office of Habitat Management and Permitting administers AS 41.14.840 (Fishway Act) and AS 41.14.870 (Anadromous Fish Act).

Regarding obstructions to fish streams, AS 41.14.840 is inadequate because it only applies when “the deputy commissioner considers it necessary.” Rather than requiring anything, this statute only allows the Alaska Department of Natural Resources to require a fishway and a device for passage of downstream migrating fish. Because implementation of this statute is completely discretionary, it is inadequate.

AS 41.14.870 has four subsections. Subsection (a) requires specification of rivers, lakes and streams that are important for the spawning, rearing or migration of anadromous fish. The Fish Distribution Database created by the Alaska Department of Fish and Game is part of the coastal management plan in Appendix G. Subsection (b) requires notification to the deputy commissioner for projects that “construct a hydraulic project, or use, divert, obstruct, pollute, or change the natural flow or bed of a specified river, lake, or stream, or use wheeled, tracked, or excavating equipment or log-dragging equipment in the bed of a specified river, lake, or stream . . .” Subsection (c) provides the deputy commissioner the discretion to require information about the project, including full plans and specifications. Subsection (d) gives the deputy commissioner the discretion to find “the plans and specifications insufficient for the proper protection of fish and game. This statute is insufficient because subsections (c) and (d) are discretionary and because it does not provide specificity about what entail “proper protection of fish and game.”

Permits are required under federal law for work in water (40 CFR Part 230, 33 CFR Part 323, 33 CFR Part 325), and by the Alaska Department of Environmental Conservation under the Section 401 certification process. While these permitting processes may require project applicants to consider alternative sites for sand and gravel extraction, the statutes and regulations do not prioritize sand and gravel extraction sites.

Unique Concern: Sand and gravel extraction as addressed by this policy is a unique concern to the KIB because shoreline modifications, stream channel alterations, habitat alteration, fish productivity and other impacts affect resources and uses important to the district. This unique concern of this resource is discussed in the Resource Analysis in Section 5.6.3.4.

Policy K-3: Best Management Practices

a. In streams and floodplains that provide habitat for anadromous fish, the following practices shall be incorporated into the siting, design, and operation of sand and gravel extraction and other mining activities:

- 1. Clearing of riparian vegetation and disturbance of natural banks shall be minimized.*
- 2. With consideration of social and environmental factors and to the extent practicable, mining site configurations shall be shaped to blend with physical features and surroundings in order to provide for diverse riparian and aquatic habitats and aesthetic views.*
- 3. Gravel washing operations that discharge effluent to streams shall use settling ponds and recycle treatment waters. Settling ponds shall be adequately diked or set back from active channels to avoid breaching by a flood. Wash water shall be recycled. Effective use of recycled water shall*

minimize water withdrawal and subsequent discharge of effluent to adjacent lands or waters.

4. *Maintain natural ground water table.*

b. This policy is established for designated as important habitat under 11 AAC 112.250(h) as described in Section 4.5.3. It applies to all uses and activities that affect the habitat functions related to the special productivity of the habitat.

Note: The KIB removed the policy from the final plan in response to comments in the Final Recommendation to the Commissioner.

Subject Use: 11 AAC 112.260

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). It provides more specificity to the statewide standard because it describes conditions that applicants must meet to minimize adverse impacts while mining sand and gravel. The measure is precise and prescriptive and adds predictability for project applicants.

Defined Area: This policy applies to a defined portion of the coastal zone because it applies to the areas appropriate for sand and gravel extraction within the district's coastal boundaries.

Sensitivity to Development: The sand and gravel sites are sensitive to development because extraction of these materials creates impacts to streams and streambeds, water flow and availability, and may disrupt or destroy habitat, affect viability and availability of fish stocks, affect floodplains, and cause the collapse of streambanks, among other potential adverse effects. Water-The sensitivity to development is discussed in more detail in the resource analysis in Section 5.6.3.4.

Not Adequately Addressed: State and federal statutes and regulations do not adequately address sand and gravel extraction because they do not specify measures to minimize the impacts listed in this policy.

The Alaska Department of Natural Resources has several statutes and regulations that address material sales and other relevant work in water. None address specific measures to minimize the adverse impacts of materials extraction.

AS 27.19.020 requires a mining operation to be conducted in a manner that prevents unnecessary and undue degradation of land and water resources, and the mining operation shall be reclaimed as contemporaneously as practicable with the mining operation to leave the site in a stable condition.

AS 27.19.030 requires a mining operator to have a reclamation plan that is approved by the commissioner of DNR prior to the commencement of mining operations.

AS 27.19.050 exempts from the requirement of a reclamation plan a small mining operation of less than 5 acres of disturbance and less than 50,000 cubic yards of gravel or other materials disturbed or removed at one location in any year and a cumulative disturbed area of less than five acres at one location.

AS 38.05.110 directs the DNR commissioner in appraisals and assessment of current market supply of materials offered for sale.

AS 38.05.115 directs the commissioner of DNR to determine the materials to be sold, and the limitations, conditions and terms of sale, including the utilization, development and maintenance of the sustained yield principle. This statute includes the concept of allocation, but not effects of mining the resource.

AS 38.05.120 sets out the approved terms and methods of sale of materials by the DNR, but does not address effects of mining the resource.

AS 38.05.128 disallows obstruction or interference with the free passage or use of a navigable water unless certain authorizations are obtained. The statute does not address the effects of mining the resource.

AS 38.05.810 allows for disposal of state land or resources for public and charitable use; it does not address sand and gravel extraction specifically, nor does it address the effects of mining the resource.

11 AAC 71.265 states that the director will, in his discretion, require a purchaser of materials to rehabilitate the sale area. If reclamation is required by the Division of Mining, Land and Water, the requirement of rehabilitation and the appraised unit cost of the material for sale shall be reflected in the contract with the materials purchaser. The director also has the discretion to require the purchaser to submit a complete mining plan for a large material-sale area if it is required to be rehabilitated. The regulation is broad and gives the Division of Mining, Land and Water discretion to place rehabilitation requirements on a purchaser of materials. The district's policy is more precise and prescriptive than this state regulation, and it provides more predictability for project applicants.

11 AAC 96.010 lists activities on state lands that require permits, including some equipment and mining methods. The regulation does not specifically address sand and gravel extraction, nor does it address effects of mining the resource.

11 AAC 97.250 requires reclamation of material sites that are in continuous use or intermittent use during a mining operation.

The Office of Habitat Management and Permitting administers AS 41.14.840 (Fishway Act) and AS 41.14.870 (Anadromous Fish Act).

Regarding obstructions to fish streams, AS 41.14.840 is inadequate because it only applies when "the deputy commissioner considers it necessary." Rather than requiring anything, this statute only allows the Alaska Department of Natural Resources to require a fishway and a device for passage of downstream migrating fish. Because implementation of this statute is completely discretionary, it is inadequate.

AS 41.14.870 has four subsections. Subsection (a) requires specification of rivers, lakes and streams that are important for the spawning, rearing or migration of anadromous fish. The Fish Distribution Database created by the Alaska Department of Fish and Game is part of the coastal management plan in Appendix F. Subsection (b) requires notification to the deputy commissioner for projects that "construct a hydraulic project, or use, divert, obstruct, pollute, or change the

natural flow or bed of a specified river, lake, or stream, or use wheeled, tracked, or excavating equipment or log-dragging equipment in the bed of a specified river, lake, or stream . . .”

Subsection (c) provides the deputy commissioner the discretion to require information about the project, including full plans and specifications. Subsection (d) gives the deputy commissioner the discretion to find “the plans and specifications insufficient for the proper protection of fish and game. This statute is insufficient because subsections (c) and (d) are discretionary and because it does not provide specificity about what entail “proper protection of fish and game.”

Permits are required under federal law for work in water (40 CFR Part 230, 33 CFR Part 323, 33 CFR Part 325), and by the Alaska Department of Environmental Conservation under the Section 401 certification process. While these permitting processes may require project applicants to consider alternative sites for sand and gravel extraction, the statutes and regulations do not prioritize sand and gravel extraction sites.

Unique Concern: Sand and gravel extraction as addressed by this policy is a unique concern to the KIB because shoreline modifications, stream channel alterations, habitat alteration, fish productivity and other impacts affect resources and uses important to the district. This unique concern of this resource is discussed in the Resource Analysis in Section 5.6.3.4.

Policy K-4: Overburden Disposal

a. Overburden in upland areas shall be saved and replaced on the disturbed area to conform to the natural topography as part of the reclamation process. Overburden shall not be disposed of in lakes, within the mean annual floodplain of streams, in high-value wetlands, or below the limit of mean high water in intertidal areas and estuaries.

b. This policy is established for designated as important habitat under 11 AAC 112.250(h) as described in Section 4.5.3. It applies to all uses and activities that affect the habitat functions related to the special productivity of the habitat.

Note: The KIB removed this policy from the final plan in response to comments in the Final Recommendation to the Commissioner.

Subject Use: 11 AAC 114.250(h)

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). It provides more specificity to the statewide standard by establishing measures applicants must employ to reduce impacts from sand and gravel extraction in the KIB. The policy is specific as to the persons and activities covered by it.

Defined Area: This policy applies to a defined portion of the coastal zone because it applies to the areas appropriate for sand and gravel extraction within the district’s coastal boundaries.

Sensitivity to Development: The sand and gravel sites are sensitive to development because extraction of these materials creates impacts to streams and streambeds, water flow and availability, and may disrupt or destroy habitat, affect viability and availability of fish stocks, affect floodplains, and cause the collapse of streambanks, among other potential adverse effects.

Water-The sensitivity to development is discussed in more detail in the resource analysis in Section 5.6.3.4.

Not Adequately Addressed: State and federal statutes and regulations do not adequately address sand and gravel extraction because they do not specify measures to minimize the impacts listed in this policy.

The Alaska Department of Natural Resources has several statutes and regulations that address material sales and other relevant work in water. None address specific measures to minimize the adverse impacts of materials extraction.

AS 27.19.020 requires a mining operation to be conducted in a manner that prevents unnecessary and undue degradation of land and water resources, and the mining operation shall be reclaimed as contemporaneously as practicable with the mining operation to leave the site in a stable condition.

AS 27.19.030 requires a mining operator to have a reclamation plan that is approved by the commissioner of DNR prior to the commencement of mining operations.

AS 27.19.050 exempts from the requirement of a reclamation plan a small mining operation of less than 5 acres of disturbance and less than 50,000 cubic yards of gravel or other materials disturbed or removed at one location in any year and a cumulative disturbed area of less than five acres at one location.

AS 38.05.110 directs the DNR commissioner in appraisals and assessment of current market supply of materials offered for sale.

AS 38.05.115 directs the commissioner of DNR to determine the materials to be sold, and the limitations, conditions and terms of sale, including the utilization, development and maintenance of the sustained yield principle. This statute includes the concept of allocation, but not effects of mining the resource.

AS 38.05.120 sets out the approved terms and methods of sale of materials by the DNR, but does not address effects of mining the resource.

AS 38.05.128 disallows obstruction or interference with the free passage or use of a navigable water unless certain authorizations are obtained. The statute does not address the effects of mining the resource.

AS 38.05.810 allows for disposal of state land or resources for public and charitable use; it does not address sand and gravel extraction specifically, nor does it address the effects of mining the resource.

11 AAC 71.265 states that the director will, in his discretion, require a purchaser of materials to rehabilitate the sale area. If reclamation is required by the Division of Mining, Land and Water, the requirement of rehabilitation and the appraised unit cost of the material for sale shall be reflected in the contract with the materials purchaser. The director also has the discretion to require the purchaser to submit a complete mining plan for a large material-sale area if it is required to be rehabilitated. The regulation is broad and gives the Division of Mining, land and Water discretion to place rehabilitation requirements on a purchaser of materials. The district's

policy is more precise and prescriptive than this state regulation, and it provides more predictability for project applicants.

11 AAC 96.010 lists activities on state lands that require permits, including some equipment and mining methods. The regulation does not specifically address sand and gravel extraction, nor does it address effects of mining the resource.

11 AAC 97.250 requires reclamation of material sites that are in continuous use or intermittent use during a mining operation.

The Office of Habitat Management and Permitting administers AS 41.14.840 (Fishway Act) and AS 41.14.870 (Anadromous Fish Act).

Regarding obstructions to fish streams, AS 41.14.840 is inadequate because it only applies when “the deputy commissioner considers it necessary.” Rather than requiring anything, this statute only allows the Alaska Department of Natural Resources to require a fishway and a device for passage of downstream migrating fish. Because implementation of this statute is completely discretionary, it is inadequate.

AS 41.14.870 has four subsections. Subsection (a) requires specification of rivers, lakes and streams that are important for the spawning, rearing or migration of anadromous fish. The Fish Distribution Database created by the Alaska Department of Fish and Game is part of the coastal management plan in Appendix G. Subsection (b) requires notification to the deputy commissioner for projects that “construct a hydraulic project, or use, divert, obstruct, pollute, or change the natural flow or bed of a specified river, lake, or stream, or use wheeled, tracked, or excavating equipment or log-dragging equipment in the bed of a specified river, lake, or stream . . .” Subsection (c) provides the deputy commissioner the discretion to require information about the project, including full plans and specifications. Subsection (d) gives the deputy commissioner the discretion to find “the plans and specifications insufficient for the proper protection of fish and game. This statute is insufficient because subsections (c) and (d) are discretionary and because it does not provide specificity about what entail “proper protection of fish and game.”

Permits are required under federal law for work in water (40 CFR Part 230, 33 CFR Part 323, 33 CFR Part 325), and by the Alaska Department of Environmental Conservation under the Section 401 certification process. While these permitting processes may require project applicants to consider alternative sites for sand and gravel extraction, the statutes and regulations do not prioritize sand and gravel extraction sites.

Unique Concern: Sand and gravel extraction as addressed by this policy is a unique concern to the KIB because shoreline modifications, stream channel alterations, habitat alteration, fish productivity and other impacts affect resources and uses important to the district. This unique concern of this resource is discussed in the Resource Analysis in Section 5.6.3.4.

Policy K-5: Reclamation and Restoration

a. Applicants for mining projects, including sand and gravel extraction, shall include a reclamation plan in the application packet. Unless the area is planned for development for another purpose, the reclamation plan shall meet the following minimum requirements:

1. *Topsoil and overburden shall be stored above the active floodplain of watercourses.*
 2. *At the end of each mining season, all disturbed areas shall be re-graded to stable slopes. Within active floodplains, re-grading to ground contours that will not entrap fish nor significantly alter stream hydraulics shall occur at the end of each operating season. Tailings used in the construction of settling ponds and other essential facilities may be retained in place until completion of their use.*
 3. *At the completion of mining activities or gravel extractions, all disturbed areas shall be stabilized and re-vegetated, unless re-vegetation activities would create more disturbance*
 4. *Restoration shall include the following:*
 - i. *All disturbed areas shall be graded to stable slopes that blend with the natural topography,*
 - ii. *Erosion control measures shall be implemented as appropriate to stabilize the site,*
 - iii. *Areas designated for re-vegetation shall be covered with topsoil to encourage establishment of native plant species,*
 - iv. *Where material sites which are excavated below groundwater may have value as habitat for waterfowl and fish, consultation with the Office of Habitat Management and Permitting on the final design of the excavation area to determine whether such sites would be appropriate for fish or wildlife enhancement,*
 - v. *The shorelines of gravel pit ponds and lakes shall be contoured to provide a submerged bench no more than 5 feet below the low water surface. The bench will be a minimum of 10 feet wide, and*
 - vi. *Shorelines will armored with coarse gravel of sufficient size to prevent shoreline erosion by waves and near-shore areas re-vegetated with native vegetation.*
- b. The portion of a gravel extraction site required to provide materials for continuing maintenance and operation of the development is excluded from compliance with subsection a 4 iii and iv of this policy. For areas where it may not be practicable to fill or re-grade because of the depth of the excavation and where there may be a danger to human safety, the applicant shall fence the area.*
- c. This policy is established for designated as important habitat under 11 AAC 112.250(h) as described in Section 4.5.3. It applies to all uses and activities that affect the habitat functions related to the special productivity of the habitat.*

Note: The KIB removed this policy from the final plan in response to comments in the Final Recommendation to the Commissioner.

Subject Use: Important Habitat Areas (11 AAC 114.250(h))

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). It provides more specificity to the statewide standard because it

Defined Area: This policy applies to a defined portion of the coastal zone because it applies to the area covered by the

Sensitivity to Development: The sand and gravel sites are sensitive to development because extraction of these materials creates impacts to streams and streambeds, water flow and availability, and may disrupt or destroy habitat, affect viability and availability of fish stocks, affect floodplains, and cause the collapse of streambanks, among other potential adverse effects. Water-The sensitivity to development is discussed in more detail in the resource analysis in Section 5.6.3.4.

Not Adequately Addressed: State and federal statutes and regulations do not adequately address sand and gravel extraction because they do not specify measures to minimize the impacts listed in this policy.

The Alaska Department of Natural Resources has several statutes and regulations that address material sales and other relevant work in water. None address specific measures to minimize the adverse impacts of materials extraction.

AS 27.19.020 requires a mining operation to be conducted in a manner that prevents unnecessary and undue degradation of land and water resources, and the mining operation shall be reclaimed as contemporaneously as practicable with the mining operation to leave the site in a stable condition.

AS 27.19.030 requires a mining operator to have a reclamation plan that is approved by the commissioner of DNR prior to the commencement of mining operations.

AS 27.19.050 exempts from the requirement of a reclamation plan a small mining operation of less than 5 acres of disturbance and less than 50,000 cubic yards of gravel or other materials disturbed or removed at one location in any year and a cumulative disturbed area of less than five acres at one location.

AS 38.05.110 directs the DNR commissioner in appraisals and assessment of current market supply of materials offered for sale.

AS 38.05.115 directs the commissioner of DNR to determine the materials to be sold, and the limitations, conditions and terms of sale, including the utilization, development and maintenance of the sustained yield principle. This statute includes the concept of allocation, but not effects of mining the resource.

AS 38.05.120 sets out the approved terms and methods of sale of materials by the DNR, but does not address effects of mining the resource.

AS 38.05.128 disallows obstruction or interference with the free passage or use of a navigable water unless certain authorizations are obtained. The statute does not address the effects of mining the resource.

AS 38.05.810 allows for disposal of state land or resources for public and charitable use; it does not address sand and gravel extraction specifically, nor does it address the effects of mining the resource.

11 AAC 71.265 states that the director will, in his discretion, require a purchaser of materials to rehabilitate the sale area. If reclamation is required by the Division of Mining, Land and Water, the requirement of rehabilitation and the appraised unit cost of the material for sale shall be reflected in the contract with the materials purchaser. The director also has the discretion to require the purchaser to submit a complete mining plan for a large material-sale area if it is required to be rehabilitated. The regulation is broad and gives the Division of Mining, land and Water discretion to place rehabilitation requirements on a purchaser of materials. The district's policy is more precise and prescriptive than this state regulation, and it provides more predictability for project applicants.

11 AAC 96.010 lists activities on state lands that require permits, including some equipment and mining methods. The regulation does not specifically address sand and gravel extraction, nor does it address effects of mining the resource.

11 AAC 97.250 requires reclamation of material sites that are in continuous use or intermittent use during a mining operation.

The Office of Habitat Management and Permitting administers AS 41.14.840 (Fishway Act) and AS 41.14.870 (Anadromous Fish Act).

Regarding obstructions to fish streams, AS 41.14.840 is inadequate because it only applies when "the deputy commissioner considers it necessary." Rather than requiring anything, this statute only allows the Alaska Department of Natural Resources to require a fishway and a device for passage of downstream migrating fish. Because implementation of this statute is completely discretionary, it is inadequate.

AS 41.14.870 has four subsections. Subsection (a) requires specification of rivers, lakes and streams that are important for the spawning, rearing or migration of anadromous fish. The Fish Distribution Database created by the Alaska Department of Fish and Game is part of the coastal management plan in Appendix G. Subsection (b) requires notification to the deputy commissioner for projects that "construct a hydraulic project, or use, divert, obstruct, pollute, or change the natural flow or bed of a specified river, lake, or stream, or use wheeled, tracked, or excavating equipment or log-dragging equipment in the bed of a specified river, lake, or stream" Subsection (c) provides the deputy commissioner the discretion to require information about the project, including full plans and specifications. Subsection (d) gives the deputy commissioner the discretion to find "the plans and specifications insufficient for the proper protection of fish and game. This statute is insufficient because subsections (c) and (d) are discretionary and because it does not provide specificity about what entail "proper protection of fish and game."

Permits are required under federal law for work in water (40 CFR Part 230, 33 CFR Part 323, 33 CFR Part 325), and by the Alaska Department of Environmental Conservation under the Section 401 certification process. While these permitting processes may require project applicants to consider alternative sites for sand and gravel extraction, the statutes and regulations do not prioritize sand and gravel extraction sites.

Unique Concern: Sand and gravel extraction as addressed by this policy is a unique concern to the KIB because shoreline modifications, stream channel alterations, habitat alteration, fish productivity and other impacts affect resources and uses important to the district. This unique concern of this resource is discussed in the Resource Analysis in Section 5.6.3.4.

Policy K-6: Subsequent Gravel Mining

- a. Alternative measures required for an initial project shall be required for subsequent permittees using the gravel source that originally underwent a consistency review.*
- b. This policy is established for designated as important habitat under 11 AAC 112.250(h) as described in Section 4.5.3. It applies to all uses and activities that affect the habitat functions related to the special productivity of the habitat.*

Note: The KIB removed this policy from the final plan in response to comments in the Final Recommendation to the Commissioner.

Subject Use: Important Habitat Areas (11 AAC 114.250(h))

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). It provides more specificity to the statewide standard because it

Defined Area: This policy applies to a defined portion of the coastal zone because it applies to the area covered by the

Sensitivity to Development: The sand and gravel sites are sensitive to development because extraction of these materials creates impacts to streams and streambeds, water flow and availability, and may disrupt or destroy habitat, affect viability and availability of fish stocks, affect floodplains, and cause the collapse of streambanks, among other potential adverse effects. Water-The sensitivity to development is discussed in more detail in the resource analysis in Section 5.6.3.4.

Not Adequately Addressed: State and federal statutes and regulations do not adequately address sand and gravel extraction because they do not specify measures to minimize the impacts listed in this policy.

The Alaska Department of Natural Resources has several statutes and regulations that address material sales and other relevant work in water. None address specific measures to minimize the adverse impacts of materials extraction.

AS 27.19.020 requires a mining operation to be conducted in a manner that prevents unnecessary and undue degradation of land and water resources, and the mining operation shall be reclaimed as contemporaneously as practicable with the mining operation to leave the site in a stable condition.

AS 27.19.030 requires a mining operator to have a reclamation plan that is approved by the commissioner of DNR prior to the commencement of mining operations.

AS 27.19.050 exempts from the requirement of a reclamation plan a small mining operation of less than 5 acres of disturbance and less than 50,000 cubic yards of gravel or other materials disturbed or removed at one location in any year and a cumulative disturbed area of less than five acres at one location.

AS 38.05.110 directs the DNR commissioner in appraisals and assessment of current market supply of materials offered for sale.

AS 38.05.115 directs the commissioner of DNR to determine the materials to be sold, and the limitations, conditions and terms of sale, including the utilization, development and maintenance of the sustained yield principle. This statute includes the concept of allocation, but not effects of mining the resource.

AS 38.05.120 sets out the approved terms and methods of sale of materials by the DNR, but does not address effects of mining the resource.

AS 38.05.128 disallows obstruction or interference with the free passage or use of a navigable water unless certain authorizations are obtained. The statute does not address the effects of mining the resource.

AS 38.05.810 allows for disposal of state land or resources for public and charitable use; it does not address sand and gravel extraction specifically, nor does it address the effects of mining the resource.

11 AAC 71.265 states that the director will, in his discretion, require a purchaser of materials to rehabilitate the sale area. If reclamation is required by the Division of Mining, Land and Water, the requirement of rehabilitation and the appraised unit cost of the material for sale shall be reflected in the contract with the materials purchaser. The director also has the discretion to require the purchaser to submit a complete mining plan for a large material-sale area if it is required to be rehabilitated. The regulation is broad and gives the Division of Mining, land and Water discretion to place rehabilitation requirements on a purchaser of materials. The district's policy is more precise and prescriptive than this state regulation, and it provides more predictability for project applicants.

11 AAC 96.010 lists activities on state lands that require permits, including some equipment and mining methods. The regulation does not specifically address sand and gravel extraction, nor does it address effects of mining the resource.

11 AAC 97.250 requires reclamation of material sites that are in continuous use or intermittent use during a mining operation.

The Office of Habitat Management and Permitting administers AS 41.14.840 (Fishway Act) and AS 41.14.870 (Anadromous Fish Act).

Regarding obstructions to fish streams, AS 41.14.840 is inadequate because it only applies when "the deputy commissioner considers it necessary." Rather than requiring anything, this statute only allows the Alaska Department of Natural Resources to require a fishway and a device for passage of downstream migrating fish. Because implementation of this statute is completely discretionary, it is inadequate.

AS 41.14.870 has four subsections. Subsection (a) requires specification of rivers, lakes and streams that are important for the spawning, rearing or migration of anadromous fish. The Fish Distribution Database created by the Alaska Department of Fish and Game is part of the coastal management plan in Appendix G. Subsection (b) requires notification to the deputy commissioner for projects that “construct a hydraulic project, or use, divert, obstruct, pollute, or change the natural flow or bed of a specified river, lake, or stream, or use wheeled, tracked, or excavating equipment or log-dragging equipment in the bed of a specified river, lake, or stream . . .” Subsection (c) provides the deputy commissioner the discretion to require information about the project, including full plans and specifications. Subsection (d) gives the deputy commissioner the discretion to find “the plans and specifications insufficient for the proper protection of fish and game. This statute is insufficient because subsections (c) and (d) are discretionary and because it does not provide specificity about what entail “proper protection of fish and game.”

Permits are required under federal law for work in water (40 CFR Part 230, 33 CFR Part 323, 33 CFR Part 325), and by the Alaska Department of Environmental Conservation under the Section 401 certification process. While these permitting processes may require project applicants to consider alternative sites for sand and gravel extraction, the statutes and regulations do not prioritize sand and gravel extraction sites.

Unique Concern: Sand and gravel extraction as addressed by this policy is a unique concern to the KIB because shoreline modifications, stream channel alterations, habitat alteration, fish productivity and other impacts affect resources and uses important to the district. This unique concern of this resource is discussed in the Resource Analysis in Section 5.6.3.4.

Policy L-1: Anadromous Fish Streams

a. In order to minimize significant adverse impacts to anadromous fish streams, applicants must implement the following procedures.

- 1. Construction activities in the vicinity of anadromous fish streams shall control erosion of disturbed areas to minimize soil deposition into fish stream waters. As necessary, this may require functional sedimentation basins or other appropriate technology to avoid significant adverse impacts to anadromous fish streams.*
- 2. Surface runoff and drainage from disturbed or developed areas such as roadways, pads or clearing shall be directed away from anadromous fish streams to minimize the introduction of substances that will affect habitat into the streams.*

b. This policy is established for designated as important habitat under 11 AAC 112.250(h) as described in Section 4.5.3. It applies to all uses and activities that affect the habitat functions related to the special productivity of the habitat.

Note: The KIB removed this policy from the final plan in response to comments in the Final Recommendation to the Commissioner.

Subject Use: Important Habitat Area (11 AAC 114.250(h))

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 112.250(h)). The policy is clear and concise regarding the requirements, the activities and the persons affected by it. The policy describes the conditions an applicant must meet to minimize significant adverse impacts to anadromous fish streams.

Defined Area: This policy applies to a defined portion of the coastal zone because it applies to the anadromous fish streams designated by the KIB as important habitat and described in Chapter 5.

Sensitivity to Development: Anadromous fish are keystone species upon which many other animals and humans in the KIB depend. They are also bellwether species by which the health of ecosystems can be measured. Anadromous fish habitat in fresh and marine waters can be adversely impacted by a wide range of development activities, including direct physical destruction of intertidal, wetland, upland or benthic habitat and effects to the organisms that depend on these habitats. Any activity that results in the introduction of pollutants, including run-off, sedimentation, soil deposition, leaching of chemicals, etc, may adversely impact fish habitats. Additionally, the introduction of non-native species may result in a change in predator-prey relationships, shoreline or stream channel modification or other changes to the landscape may modify water flow, circulation, quantity, temperature and other conditions that affect the health of anadromous fish habitat. The relationship between fresh and salt water systems vital to the health of anadromous fish habitat may be affected by development on or offshore, or even inland. The sensitivity to development is discussed in more detail in the resource analysis in Sections 5.6.3.3 and 5.6.3.4.

Not Adequately Addressed: State and federal laws do not adequately address protection of this important habitat because the relevant laws do not require specific prescriptive measures, rely on agency discretion to assign Best Management Practices (BMPs) such as the ones listed in this policy, and because they do not provide predictability for applicants.

Regarding the control of discharges to anadromous streams, AS 41.14.840 (Glenn's)

Federal authorities governing discharges of dredged or fill material into the waters of the United States (33 CFR Part 323 and 33 CFR Part 325) require permits for work that includes such discharges. The Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material names significantly adverse effects of such discharges and states that these will not be permitted "unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem." The permitting agency has discretion to determine whether applicant-proposed measures to reduce impacts are appropriate and practicable on a case-specific basis.

Unique Concern: The important habitat, anadromous fish streams, addressed by this policy is a unique concern to the KIB because of the human dependence on this resource as documented throughout the resource inventory and analysis

Policy L-2: Seabird and Waterfowl Concentrations

a. Applicants shall not conduct dredge and fill activities and facility construction in areas of important seabird and waterfowl habitat.

b. This policy is established for designated as important habitat under 11 AAC 112.250(h) as described in Section 4.5.3. It applies to all uses and activities that affect the habitat functions related to the special productivity of the habitat.

Note: The KIB removed this policy from the final plan in response to comments in the Final Recommendation to the Commissioner.

Subject Use: Important Habitat (11 AAC 114.250(h))

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). The policy is clear and concise regarding the requirements, the activities and the persons affected by it. The policy describes a use that will not be allowed in an area that is important as seabird or waterfowl habitat, as consistent with 11 AAC 114.270(g).

Defined Area: This policy applies to a defined portion of the coastal zone because it applies to areas within the district that have been identified as important habitat.

Sensitivity to Development: Important seabird and waterfowl habitat in the district is sensitive to development because disruption, contamination, or destruction of areas important for nesting, migratory stopovers, molting and feeding by these species can cause significant adverse impacts that may affect reproduction, viability, or even survival. The sensitivity to development is discussed in more detail in the resource analysis in Section 5.6.3.4 and Section 5.2.6.1.

Not Adequately Addressed: Important seabird and waterfowl habitat is not adequately addressed because state and federal law are vague or silent regarding dredging and filling of seabird and wildfowl habitat.

The Office of Habitat Management and Permitting administers AS 41.14.840 (Fishway Act) and AS 41.14.870 (Anadromous Fish Act), which address impacts to fish habitat and fish passage in anadromous streams.

Regarding obstructions to fish streams, AS 41.14.840 is inadequate because it only applies when “the deputy commissioner considers it necessary.” Rather than requiring anything, this statute only allows the Alaska Department of Natural Resources to require a fishway and a device for passage of downstream migrating fish. Because implementation of this statute is completely discretionary, it is inadequate.

AS 41.14.870 has four subsections. Subsection (a) requires specification of rivers, lakes and streams that are important for the spawning, rearing or migration of anadromous fish. The Fish Distribution Database created by the Alaska Department of Fish and Game is part of the coastal management plan in Appendix G. Subsection (b) requires notification to the deputy commissioner for projects that “construct a hydraulic project, or use, divert, obstruct, pollute, or change the natural flow or bed of a specified river, lake, or stream, or use wheeled, tracked, or excavating equipment or log-dragging equipment in the bed of a specified river, lake, or stream . . .” Subsection (c) provides the deputy commissioner the discretion to require information about the project, including full plans and specifications. Subsection (d) gives the deputy commissioner the discretion to find “the plans and specifications insufficient for the proper protection of fish and game. This statute is insufficient because subsections (c) and (d) are discretionary and because it does not provide specificity about what entail “proper protection of fish and game.”

The statewide ACMP Habitats standard (11 AAC 112.300) has three subsections. Subsection (a) lists 9 types of habitats subject to the program. Subsection (b) of the Habitats standard specifies management measures that apply to the habitats identified in subsection (a). While DNR response to the Public Review Draft of the coastal management plan imply that these are the exclusive management measures for habitats under the ACMP, the standard does not expressly limit enforceable policies from addressing aspects of the habitats other than what is specified in part (b). In fact, although the management measures for this subsection have been modified, under the previous standard, coastal management issues were never limited to these measures. Management measures listed for each type of habitat are extremely limited, and except for a few habitat types, the measures do not address living organisms that depend on the productivity of the habitat to survive.

Some bird species are protected under 16 USC 703-712 (Migratory Bird Treaty Act); this includes permit requirements to take, possess, transport, sell, purchase, barter, import or export all species of birds protected under the MBTA. A list of protected species is included in the Act; not all species of seabirds and waterfowl are included in its protections. Neither the MBTA nor the regulations promulgated under the Act address dredging or filling into seabird or waterfowl habitat.

Unique Concern: The issues addressed by this policy are of unique concern to the KIB due to the use of areas within the district for resting and/or staging areas by migratory birds and as nesting and rearing areas by numerous species. This unique concern of this resource is discussed in the Resource Analysis in Section 5.6.3.4.

Policy L-3: Winter Deer and Elk Habitat

a. Development activities that would result in significant impacts shall not be located in winter habitat that supports wintering concentrations of deer and wild elk.

b. This policy is established for designated as important habitat under 11 AAC 112.250(h) as described in Section 4.5.3. It applies to all uses and activities that affect the habitat functions related to the special productivity of the habitat.

Note: The KIB removed this policy from the final plan in response to comments in the Final Recommendation to the Commissioner.

Subject Use: Important Habitat (11 AAC 112)

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). The policy is clear and concise regarding the requirements, the activities and the persons affected by it. The policy describe a use that will not be allowed in an area that is important as winter deer and elk habitat, as consistent with 11 AAC 114.270(g).

Defined Area: This policy applies to a defined portion of the coastal zone, specifically, those areas designated as important habitat areas and described in Chapter 5, Section 5.6.1.

Sensitivity to Development: The winter deer and elk habitat is sensitive to development because project activities can alter productivity, forage opportunity, and availability of protective cover;

activities also may disrupt life cycle functions and alter deer and elk behavior with resulting harmful effects. The sensitivity to development is discussed in more detail in the resource analysis in Section 5.6.3.4.

Not Adequately Addressed: Winter deer and elk habitat is not adequately addressed by state or federal law or regulations. The Alaska Department of Fish and Game, Division of Wildlife Conservation, monitors availability of these species as game animals, but is not charged with protection of winter deer and elk habitat.

The Office of Habitat Management and Permitting administers AS 41.14.840 (Fishway Act) and AS 41.14.870 (Anadromous Fish Act), which do not address deer and elk habitat.

The statewide ACMP Habitats standard (11 AAC 112.300) has three subsections. Subsection (a) lists 9 types of habitats subject to the program. This subsection does not specifically list upland habitats. While upland habitats could be designated as important habitats, there is no guarantee that habitats important habitats designated by the district would be approved by DNR.

Subsection (b) of the Habitats standard specifies management measures that apply to the habitats identified in subsection (a). While DNR response to the Public Review Draft of the coastal management plan imply that these are the exclusive management measures for habitats under the ACMP, the standard does not expressly limit enforceable policies from addressing aspects of the habitats other than what is specified in part (b). In fact, although the management measures for this subsection have been modified, under the previous standard, coastal management issues were never limited to these measures. Management measures listed for each type of habitat are extremely limited, and except for a few habitat types, the measures do not address living organisms that depend on the productivity of the habitat to survive.

There are no federal regulations that specifically address the subject of this policy.

Unique Concern: The coastal resources addressed by this policy are a unique concern to the KIB because deer and elk are important for subsistence and sport hunting in the district. This unique concern of this resource is discussed in the Resource Analysis in Section 5.4.2.1.

Policy L-4 Known Bear Denning Sites

a. New development shall avoid locating within one mile of known bear denning areas. Where development in these areas cannot be avoided, development and related activities shall incorporate measures to minimize disturbance to bear denning habitat during the period of September 15 through May 15.

b. This policy is established for designated as important habitat under 11 AAC 112.250(h) as described in Section 4.5.3. It applies to all uses and activities that affect the habitat functions related to the special productivity of the habitat.

Note: The KIB removed this policy from the final plan in response to comments in the Final Recommendation to the Commissioner.

Subject Use: This policy applies to uses and activities covered by the important habitat, recreation, and subsistence designations identified in 11 AAC 114.250.

Criteria: This policy fulfills the requirements of 11 AAC 114.270(a) because it addresses *uses and activities* identified in an acceptable subject use (11 AAC 114.250). It provides more specificity to the statewide standards because it describes how minimization of impacts to this important coastal resource shall be accomplished. The policy aids project applicants by enhancing predictability of the ACMP.

Defined Area: This policy applies to a defined portion of the coastal zone because it applies to the area covered by the designated areas established by the district under 11 AAC 114.250 and described in Section 4.5.3.

Sensitivity to Development: This coastal resource is sensitive to development because project activities can alter productivity, forage opportunity, and availability of protective cover; activities such as noise or construction also may disrupt life cycle functions and bear behavior with resulting harmful effects. The sensitivity to development is discussed in more detail in the resource analysis in Section 5.6.3.4.

Not Adequately Addressed: State and federal statutes and regulations do not adequately address impacts to bear denning sites. There is no specific regulation of activities in or near such habitats. The Alaska Department of Fish and Game, Division of Wildlife Conservation, monitors availability of these species as game animals, but is not charged with protection of bear denning sites.

The Office of Habitat Management and Permitting administers AS 41.14.840 (Fishway Act) and AS 41.14.870 (Anadromous Fish Act), which do not bear denning sites.

The statewide ACMP Habitats standard (11 AAC 112.300) has three subsections. Subsection (a) lists 9 types of habitats subject to the program. This subsection does not specifically list upland habitats. While upland habitats could be designated as important habitats, there is no guarantee that habitats important habitats designated by the district would be approved by DNR.

Subsection (b) of the Habitats standard specifies management measures that apply to the habitats identified in subsection (a). While DNR response to the Public Review Draft of the coastal management plan imply that these are the exclusive management measures for habitats under the ACMP, the standard does not expressly limit enforceable policies from addressing aspects of the habitats other than what is specified in part (b). In fact, although the management measures for this subsection have been modified, under the previous standard, coastal management issues were never limited to these measures. Management measures listed for each type of habitat are extremely limited, and except for a few habitat types, the measures do not address living organisms that depend on the productivity of the habitat to survive.

Unique Concern: The Kodiak coastal bear denning sites addressed by this policy are a unique concern to the KIB because Kodiak bears are a unique subspecies of the brown or grizzly bear (*Ursus arctos middendorffi*). They live exclusively on the islands in the Kodiak Archipelago and have been isolated from other bears for about 12,000 years. Brown bear concentrations in the district are among the highest in the state. Healthy habitat is critical to the survival of the bears, which are important for tourism and recreation. This unique concern of this resource is discussed in the Resource Analysis in Section 5.3.2.1.